



**MID-LEVEL
HEALTH WORKER
TRAINING MODULES**

**Instructor's
Manual**

- PN - AAN - 917 -

Skin

**Dental, Eyes, Ears,
Nose, and Throat**



The MEDEX Primary Health Care Series

Common Problems
SKIN

Instructor's Manual

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Teaching Plan 1

Identifying Skin Lesions

- OBJECTIVES**
1. Describe the following skin lesions:

Macule	Vesicle
Papule	Burrow
Pustule	Ulcer
 2. Identify these lesions on a patient or in a photograph.

METHODS Self-instruction, discussion, slide presentation

MATERIALS Students' Text - Unit 1, slides, projector, screen

PREPARATION Complete your analysis of pretest results. Assign students to small working groups of three or four persons. Each group should include students with high pretest scores and students with low pretest scores.

Select and clean slides. Check and set up projector and screen.

TIME: 1 ½ hrs

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Instructor introduces and explains the Task Analysis Table. | 15 min |
| 2. Instructor presents slides on anatomy and physiology of the skin. | 30 min |
| 3. Instructor presents slides of skin lesions. Students write down names of lesions presented on slides. Instructor leads discussion on differences among kinds of skin lesions. | 35 min |
| 4. Instructor evaluates students' knowledge with an informal posttest. | 10 min |

ANSWERS TO REVIEW QUESTIONS

Assessing Patients with Skin Problems

1. Describe the following lesions.
 - a. Ulcer *A deep skin lesion that affects both the dermis and epidermis. Although it is often round, sometimes its shape is irregular.*
 - b. Papule *A small lesion like a macule but raised above the surface of the skin.*
 - c. Vesicle *A raised skin lesion with clear fluid inside.*
 - d. Macule *A small (less than 1 cm), flat, usually round lesion that is different in color from the surrounding skin.*
 - e. Pustule *A lesion similar to a vesicle, but with pus inside it.*
 - f. Burrow *Small, slightly raised lines that are caused by creatures that tunnel under the skin.*
2. List directions and questions you should ask when interviewing a patient who complains of skin problems.
 - a. *Describe the problem.*
 - b. *How long have you had the problem?*
 - c. *Do you have any allergies?*
 - d. *Has your skin been in contact with any new chemical substances?*
 - e. *Is any other family member complaining of the same problem?*
 - f. *Have you taken any treatment for this problem before.*
3. During a physical examination of the skin, you are expected to identify and record abnormal findings. Next to each category below, give an example of an abnormal finding and explain the meaning of that finding.

	ABNORMALITY	MEANING
a. Temperature	<i>heat associated with lesions</i>	<i>inflammation</i>
b. Color	<i>redness</i>	<i>inflammation</i>
	<i>loss of color</i>	<i>fungus infections and leprosy</i>
c. Texture	<i>roughness</i>	<i>chronic skin problem</i>
d. Moisture	<i>wet lesion</i>	<i>sign of severe irritation or infection</i>
e. Sensation	<i>pain</i>	<i>inflammation/ infection</i>
	<i>loss of sensation</i>	<i>leprosy</i>

Slide Narration for Teaching Plan 1

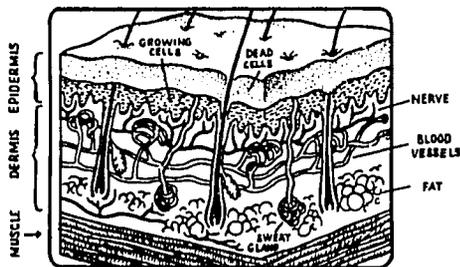
1. The skin and the fat underneath it is a protection for the body. The skin protects the body from heat, cold, injury, and infection. The skin also helps to control the temperature of the body. If the body is too hot, because of fever, cooling the skin will help to lower the fever. If the body is too cold, warming the skin with clothing or blankets will warm the body.



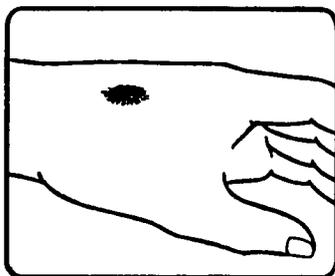
2. The skin has two layers—the epidermis and the dermis. Both layers are made of cells.

In the epidermis, the cells on the outside of the body are dead. They drop off like scales.

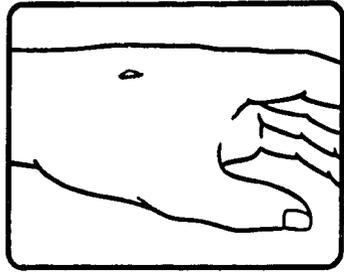
The dermis contains blood vessels that supply the skin with nutrients. The dermis also contains nerves, hairs, oil glands and sweat glands.



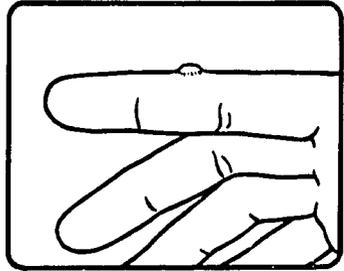
3. This is a picture of an ulcer. An ulcer damages both the epidermis and the dermis. Ulcers often bleed. This is because of damage to blood vessels in the dermis.



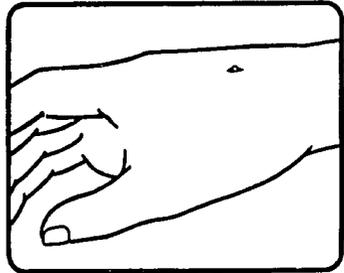
4. Here you see a papule. A papule is not usually more than one centimeter across. Notice that the edges of a papule are sharp. Notice also how the lesion is raised above the level of the skin. Papules can be several colors—pink, red, brown, or any color in between. The shape of a papule is often flat, coned or pointed.



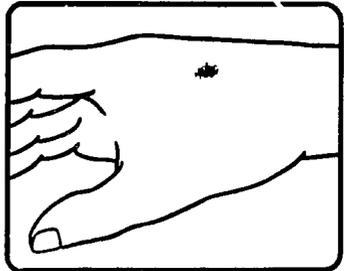
5. This is a small vesicle. A vesicle is not usually more than one centimeter across. Its edges are sharp. It is filled with clear fluid. You will see small vesicles like this in herpes simplex.



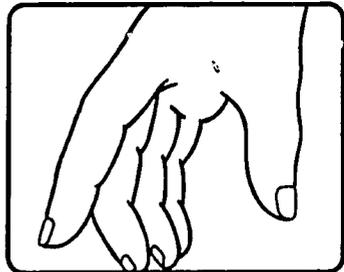
6. In this slide, you see a pustule. A pustule is usually smaller than one centimeter across. A pustule is like a vesicle, but instead of clear fluid, it contains pus.



7. This picture shows a macule. A macule is a small skin lesion, usually less than one centimeter across. It is not raised above the surface of the skin.



8. This picture shows a burrow. A burrow is a tunnel made under the skin by the small scabies mite.



Teaching Plan 2

History of Skin Problems

- OBJECTIVES**
1. Interview a fellow student to obtain information about his 'skin problem.'
 2. Record findings of this interview on official forms in the recommended way.

METHODS Self-instruction, discussion, practice interview

MATERIALS Students' Text—Unit 1, case studies, record forms

PREPARATION

Identify patients with skin problems who may come to your classroom.

TIME: 1½ hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor demonstrates taking the history of a patient's skin problem. | 30 min |
| 2. a. Students practice taking medical histories from other members of their work groups. For this activity, students will use case studies in Unit 2 and Unit 5 as a basis for role play. After each interview, students will be evaluated by members of their work group. | 1 hr |
| b. If patients are available, this activity should replace Activity 2a. Patients will be brought into the classroom for students to interview and examine. | |

Teaching Plan 3

Medical History and Physical Examination of Patients with Skin Problems; Clinical Practice

- OBJECTIVES**
1. Interview a patient and obtain information about his skin problem.
 2. Examine a patient with a skin problem using the proper procedure.
 3. Record findings of interview and examination on official forms in the recommended way.

METHODS Clinical demonstration, clinical practice

MATERIALS Skill checklists for medical history and physical examination of skin problems, record forms

PREPARATION

Arrange for students to spend two hours in the skin clinic with suitable supervision.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|-------------|
| 1. Instructor demonstrates interview and examination with a clinic patient. | 15 min |
| 2. Students interview and examine patients with skin problems using checklist as a guide to correct performance. | 1 hr 45 min |
| 3. Students present their findings to the class. Instructor and class members comment on these findings. | 1 hr |

Teaching Plan 4

Skin Problems Spread by Personal Contact

OBJECTIVES

1. Describe the kinds of lesions caused by:
 Impetigo Ringworm
 Scabies Tinea versicolor
 Lice
2. Describe the typical distribution of these lesions.
3. Demonstrate a patient interview.
4. Describe the treatment and care of patients suffering from these problems.
5. Demonstrate instruction of patients and family members in the home care and prevention of these problems.
6. Demonstrate the application of soaks.

METHODS Self-instruction, slide presentation, discussion, case study exercises #47, 57, and 58, role-play

MATERIALS Students' Text—Unit 2, slides, projector and screen, case study exercises #47, 57, and 58 and Patient Care Procedures for soaks

PREPARATION

Prepare and clean slides and projector. Check and set up projector and screen.

LEARNING ACTIVITIES

- | | |
|---|-------------|
| 1. Instructor makes presentation and leads discussion on signs and symptoms of:
Impetigo Ringworm
Scabies Tinea versicolor
Lice | 1 hr |
| 2. Instructor presents slides showing lesions and organisms associated with these problems. Students describe each lesion and identify each problem. | 1 hr |
| 3. Instructor demonstrates the application of warm and cold soaks.

Students practice the procedure using the checklist as a guide. | 1 hr |
| 4. Students work in small groups. Each group works on case study exercises. | 1 hr |
| 5. Each group presents its case study findings for discussion and comment by instructor and class. | ½ hr |
| 6. Instructor assigns each work group one or two skin problems from this unit. Group members take turns playing the roles of patient, health worker or observer.

Each student is rated on his ability to advise on home care and prevention of skin problems. The observer completes the skill checklist as he rates the performance of another student. | 1 hr 15 min |
| 7. Instructor leads discussion on the role play. | 15 min |

ANSWERS TO REVIEW QUESTIONS

Skin Problems Spread by Personal Contact

1. Impetigo starts with small vesicles. Describe what happens to the lesions if no treatment is given.

They become encrusted and later ulcerate.

2. What advice would you give to a mother whose child has impetigo?

Wash with clean soap and water, removing crusts four times a day for twenty minutes each time until lesions dry up. In the future, observe good body hygiene and avoid direct contact with persons with impetigo.

3. If one person in a family has scabies, what advice and instructions would you give to the family?

Treat the entire family. Thoroughly wash all clothes and bedding.

4. If a person has scabies, on what parts of his body would you expect to find lesions?

Scabies may be found between the fingers, on the wrists, around the waist, and on the buttocks and genitals.

5. Why do scabies lesions often become infected?

When people scratch their skin to relieve the itching of scabies, they frequently introduce organisms that cause infection.

6. Why would you examine a patient's whole family if the patient has lice?

Lice are spread by personal contact.

7. How would you treat a patient with lice?

- a. *The patient should bathe before applying benzyl benzoate lotion to the affected area. Then he should not bathe again for twenty-four hours. Benzyl benzoate should be applied again, and the patient should not bathe for another twenty-four hours. Repeat in one week if needed.*
- b. *Clothing should be boiled or exposed to strong sunlight.*
- c. *All family members should be examined and treated if affected.*

8. Describe the lesions of ringworm and the usual symptoms of this disease.

Ringworm lesions are red and round. The edges are sharp. They are made of very small vesicles. As the lesion grows, the skin in the center flakes off and appears normal again. This is called central clearing. On the scalp, the lesions are often scaly. Where the skin is moist—in the groin, in the armpits, and under the breasts—the lesions become wet, very itchy, and red. The lesions are flat. Their edges are sharp. Sometimes you will see vesicles along the edges of the lesions. Sometimes you will see the vesicles further away from the lesions and separated from them by healthy skin.

9. How would you treat ringworm of the scalp?

Whitfield's ointment twice a day for at least six weeks.

10. What is the treatment of tinea versicolor?

- a. *Selenium sulfide lotion 2.5% should be applied to the skin and lathered. After fifteen minutes, the patient should wash it off. Instruct the patient to reapply the lotion daily for four days and then twice a week for two months.*
- b. *If the infection reoccurs, sodium thiosulfate can be used.*

ANSWERS TO REVIEW EXERCISE

Students are to fill in the following chart without looking at their text.
They then compare their answers with the text.

PROBLEM	CAUSE	LOCATION	LESIONS
1. Scabies	<i>parasite (scabies mite)</i>	<i>Between the fingers, on the wrists, around the waist, and on buttocks and genitals</i>	<i>May see tiny (3mm) burrows under the skin. Lesions often infected by bacteria</i>
2. Lice	<i>parasite</i>	<i>Scalp (head lice) Groin (pubic lice) Body (body lice)</i>	<i>Lice are 1-4 mm long. Their eggs are called nits and are attached to base of hair. They are tiny white specks</i>
3. Ringworm	<i>fungus</i>	<i>Anywhere on body. Scalp favored in children. Moist areas like arm pits, groin, and under breasts</i>	<i>Patches with sharp, raised, red edges and a tendency to scaling and clearing in the center</i>
4. Impetigo	<i>bacteria</i>	<i>Face, arms, legs, often in children</i>	<i>First lesion is often an insect bite which becomes infected. A small pustule forms a crust with moisture underneath</i>
5. Tinea Versicolor	<i>fungus</i>	<i>Trunk, particularly chest, back</i>	<i>Macules which scale when scraped. They are lighter than the surrounding skin and may itch mildly</i>

Case Study #47

Name of Patient: Sanford, Carol
Sex: Female
Date of Birth: 10 April 1972
Date of Visit: 11 October 1980
Urine: Normal
Vital Signs: Temperature 37°C
Pulse 90
Respirations 24
Weight 24.3 kg.

Medical History: The mother complains that her daughter has a "rash which she scratches all the time."

The rash started ten days ago. At first it was in the armpits. Then it appeared between the fingers and toes. It has now spread to the trunk and between the buttocks. The child sleeps alone. Nobody else in the family has the same complaints.

Past medical history: The child has had chicken-pox and measles. She has a normal bowel movement every day and urinates normally.

Physical Examination: The child does not look ill. She is lively and cooperative. Her mucous membranes are pink, her tongue clean. Her tonsils are normal. Chest: percussion note and breath sounds are normal. Heart: normal. Abdomen: normal.

Diagnosis: Scabies

Patient Care:

1. Encourage the entire family to receive treatment.
2. Patient should bathe with soap and water. Then the patient should dry herself with a towel.
3. Apply 20% benzyl benzoate emulsion to the entire body.

4. Do not bathe again for twenty-four hours. Then apply more 20% benzyl benzoate emulsion.
5. After waiting another twenty-four hours, wash with soap and water.
6. Wash all clothes and bedding with soap and water.

Diagnostic Points: 1. Original site of rash was in the armpits and later between the fingers and the toes.

2. Scratching all day and all night.

Case Study #57

Name of Patient: Williams, Joyce
Sex: Female
Date of Birth: 1 December 1976
Date of Visit: 3 October 1980
Urine: Normal
Vital Signs: Temperature 37°C
Pulse 92
Respiration 24
Weight 16.2 kg.

Medical History: Child was brought to the clinic because she has "a rash which is spreading." The rash started a week ago when red spots appeared on her face. Soon after, the spots changed into yellow vesicles. These vesicles then burst. A yellow fluid came out of them. The fluid dried and formed crusts.

This child now has spots on her legs.

Past medical history: The child has had occasional colds. She had diarrhea and vomiting at the age of three.

Physical Examination: The child does not look ill. She looks well-nourished and good-tempered. Her mucous membranes are pink. Her tongue is clean and moist. Her tonsils are normal. Lymph glands are normal. Her neck is normal. Her chest is normal. Her heart is normal. Her abdomen is normal.

She has yellow, crusty lesions with red edges on both cheeks and the chin. She has the same kinds of lesions on both legs.

Diagnosis: Impetigo

Patient Care:

1. Wash lesions with clean, soapy water and gently remove crusts. Continue to apply soaks three or four times daily until lesions are dry and crusts have come off.
2. Give 5 ml ampicillin syrup four times a day for one week.
3. Tell the mother to cut child's fingernails short and keep them clean. This prevents the spread of infection from scratching.

Diagnostic Points:

1. The lesions are crusts on red skin.
2. Lesions are located on the face and legs.

Case Study #58

Name of Patient: Smith, Donald
Sex: Male
Date of Birth: 7 October 1948
Date of Visit: 4 February 1980
Urine: Normal
Vital Signs: Temperature 36.8°C
Pulse 72
Respiration 15
Weight 58.5 kg.
Blood Pressure 130/80

Medical History: The patient complains of "itchy rash in the groin." This has troubled him for some weeks.

Past medical history: Nothing special to note. Family history: Father died of "high blood pressure." His mother is alive and well. He does not know anything about the health of grandparents, aunts or uncles. All his brothers and sisters are alive and well.

Physical Examination: This man looks healthy and muscular. His mucous membranes are pink. His tongue is clean. His tonsils are normal. Lymph glands are normal. His neck is normal. His heart is normal. His chest is normal. His abdomen is normal.

He has large circular lesions on both thighs, the lower abdomen and in the groin. The lesions have irregular, reddish edges. The skin in the center of the lesions appears normal. Scratch marks are in and around the lesions.

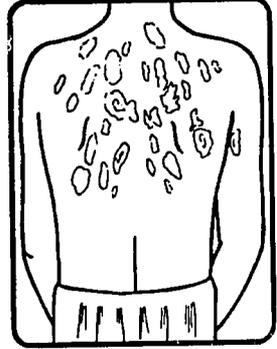
Diagnosis: Ringworm

- Treatment:**
1. Keep the affected area dry. Use talcum powder after bathing.
 2. Apply Whitfield's ointment twice a day for six weeks or until rash clears.
 3. Tell the patient to boil all his clothes.
 4. If the rash does not clear up after six weeks of treatment, give Griseofulvin by mouth.

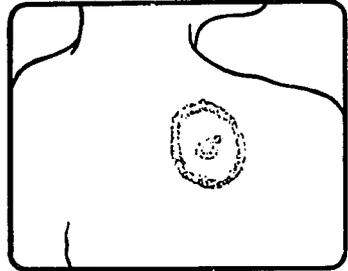
- Diagnostic Points:**
1. Kind of lesion.
 2. Location of lesion.

Slide Narration for Teaching Plan 4

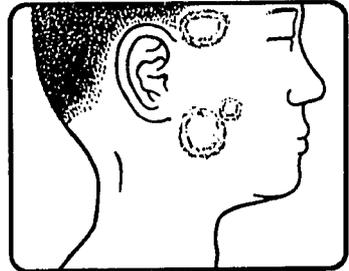
1. These round, scaly lesions with clear contours are ringworm lesions.



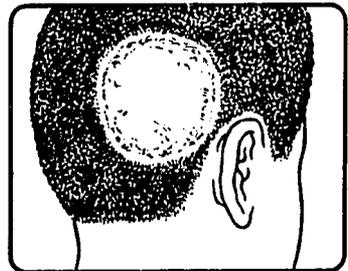
2. Here is another picture of ringworm. Notice that the edges of these lesions are inflamed. There are small pustules in the inflamed skin. This picture shows how the centers of these lesions seem healthy.



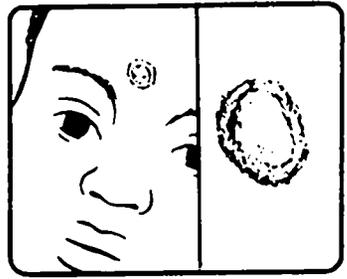
3. This slide shows ringworm of the face and scalp.



4. This is another picture of ringworm of the scalp.



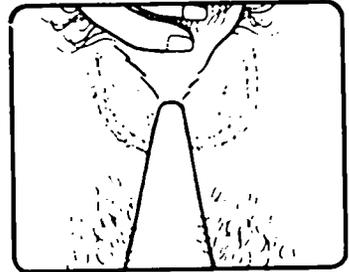
5. On the left of this picture, you can clearly see the circle made by ringworm infection. In the close up, at the right of the picture, you can see the small pustules that are typical of ringworm.



6. Ringworm can usually be recognized, even if the skin is very dark.



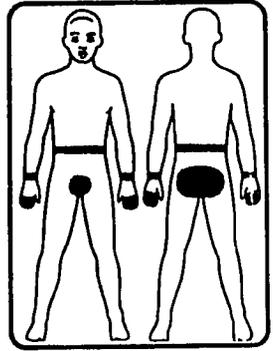
7. This shows ringworm in the groin. Lesions like this are very difficult to cure unless air can flow around the infected area.



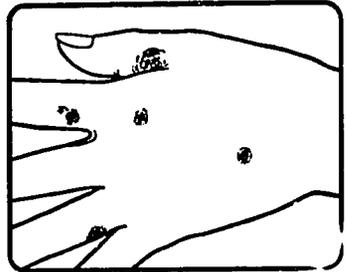
8. Now, this slide shows the lesions of tinea versicolor. This is a very common skin problem in warm countries. You can see that, in this patient, the lesions cover much of the abdomen.



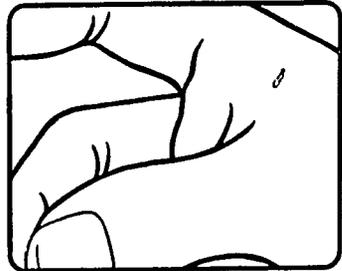
9. This slide shows where the lesions of scabies usually appear—between the fingers, on the wrist, around the waist and on the buttocks and genitals.



10. In this picture, you can see scabies on the hand.



11. This is a picture of a burrow, or tunnel made by the scabies mite.

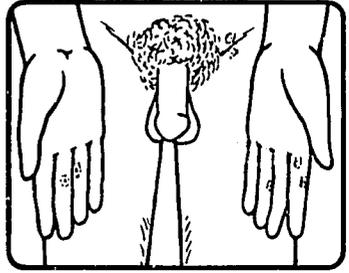


12. If you could cut into one of these tunnels . . .



13. . . . you would see the small mite, as you can on the left of this picture. On the right of the picture is another burrow.

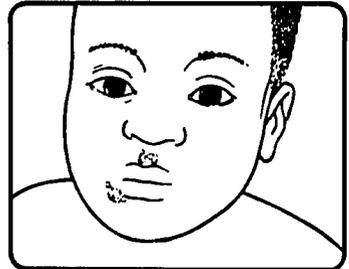
14. This slide shows a patient with scabies in the groin as well as on the hands.



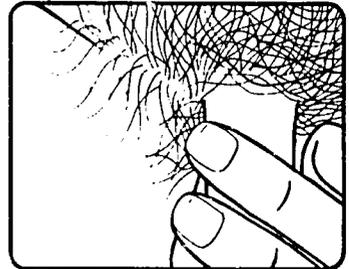
15. If scabies is not treated correctly, it can cause serious skin problems like this. This patient has scratched the lesions. They have become infected.



16. This slide shows impetigo. In this case, the impetigo has resulted from infection of scabies lesions.



17. Here you see lice and nits on the pubic hair. Nits are the eggs of lice.



18. This slide also shows nits on pubic hair.



Teaching Plan 5

Community Education: Care and Prevention of Skin Problems

- OBJECTIVES**
1. Identify the main messages to be presented to members of the community.
 2. Outline a presentation that will include these health messages.
 3. Develop a health presentation based upon these messages.
 4. Present this message to fellow students in the classroom.

METHODS Self-instruction, demonstration and return demonstration, discussion.

MATERIALS Students' Text—Unit 3, Skill Checklist

PREPARATION

Prepare for the presentation of a health message as a demonstration.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor leads discussion on guidelines for presenting health messages. | 30 min |
| 2. Instructor introduces skill checklist for evaluating presentations of health messages. | 15 min |
| 3. Instructor presents a community health talk. Students comment on and discuss the presentation. | 30 min |
| 4. Students select health topics from this module and work in small groups to plan presentations they will give to the class. | 45 min |
| 5. Each group makes a short presentation to the class. Discussion follows each presentation. | 1 hr |

Teaching Plan 6

Skin Problems Not Usually Spread by Personal Contact

OBJECTIVES 1. Describe the clinical picture and typical lesions that occur in:

Cellulitis Tropical ulcers
Boils and abscesses Herpes simplex

2. Describe treatment and care for patients with these skin problems.
3. Demonstrate instruction of patients and families in the home care of these problems.
4. Demonstrate application of dressings, and incision and drainage of boils and abscesses.

METHODS Discussion, slides and projector, demonstration, role-play.

MATERIALS Students' Text—Unit 4, slides, projector, screen, materials for dressing, incision and drainage of boils and abscesses

PREPARATION

Select and clean slides. Check and set up projector and screen.

TIME: 3 hrs

LEARNING ACTIVITIES

1. Instructor leads a discussion on signs and symptoms of:

Cellulitis Tropical ulcer
Boils Herpes simplex
Abscesses

1 hr

	TIME
2. Instructor presents slides to illustrate these skin problems. Students describe lesions shown in slides and identify skin problems.	30 min
3. Instructor uses a model to demonstrate dressing, incision and drainage of a boil	30 min
4. Students in small groups repeat demonstration and role-play advising patients in home care of lesions.	1 hr

ANSWERS TO REVIEW QUESTIONS

Skin Problems Not Usually Spread by Personal Contact

1. What would make you decide to open a boil or abscess by cutting into it with a sterile knife?

Seeing that it is soft and has a yellow head.

2. What is the indication for putting a patient with boils on a course of penicillin?

If the boil is on the face, or the patient has a fever, or the infection is very large.

3. If a patient keeps getting boils, what disease might he have?

Diabetes

4. What does the infected area of skin look like when a patient has cellulitis?

The infected part is swollen, red, warm, and tender. It feels firm when you touch it.

5. Which of these would you do to treat cellulitis?

a. Give penicillin

b. Apply warm soaks four times a day

c. Refer the patient to hospital if no improvement is seen after two days

d. Open the infected part by cutting into it

e. Give aspirin for pain and fever

6. A tropical ulcer usually begins with a small cut or insect bite. Describe how this develops into an ulcer.

During several days or weeks the small lesion spreads to cover a rounded area several centimeters in width. The edges are firm and raised. The center contours are soft, irregular tissue covered with blood and pus.

7. Describe how you would treat this patient.

The patient has had an ulcer on his leg for ten days. It is 4 cm across. The skin around the ulcer is inflamed. The ulcer smells bad. Pus drains from it. The patient complains of pain around the ulcer.

Elevate the leg. Apply warm salt water soak. Teach the patient how to apply soaks at home. The ulcer should be soaked for twenty minutes four times a day. Swab ulcer with hydrogen peroxide each time it has been soaked. Cover the ulcer with clean gauze. Give penicillin and streptomycin. Advise patient to eat more body-building foods. Explain that the patient and his family must get treatment as soon as they cut or injure themselves.

8. How do you decide if a patient with tropical ulcer requires referral? Select the correct answer.

_____ a. When the patient has a fever of 40°C.

 x b. If the ulcer does not respond to treatment after four to six weeks.

_____ c. If the ulcer shows signs of infection.

9. As well as soaking and dressing a tropical ulcer, what else must be done

a. by the health worker?

1) *Advise the patient to eat more body building foods.*

2) *Explain the importance of seeking immediate treatment for cuts.*

b. by the patient?

1) *The patient must stay in bed.*

2) *Elevate his leg.*

10. Where would you expect to see the lesions of herpes simplex?
What would these lesions look like?

Small vesicles that burst and form crusts, usually found around the mouth.

11. How do the lesions of herpes simplex start and develop?

Episodes of herpes simplex sores develop after a fever, dietary upset, minor physical or emotional disturbance.

12. What is one possible serious complication of herpes simplex?
How would you deal with it?

A serious complication of herpes simplex is a lesion on the cornea of the eye. A health worker should refer the patient to the hospital.

ANSWERS TO REVIEW EXERCISE

Students are to fill in the following chart without looking at their text.
They then compare their answers with the text.

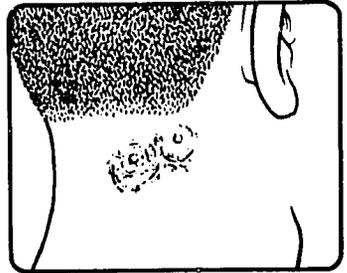
PROBLEM	CAUSE	LOCATION	LESIONS
1. Cellulitis	<i>bacteria</i>	<i>usually related to cut or sore on arms and legs</i>	<i>Infected part is swollen, red, warm and tender. It feels firm when you touch it.</i>
2. Boils and Abscesses	<i>bacteria</i>	<i>anywhere, but usually starts in hair follicle</i>	<i>Small area of inflammation, which enlarges. Skin becomes swollen, red, hot, painful and may form yellow head or feel soft and fluctuant inside.</i>
3. Tropical Ulcer	<i>bacteria</i>	<i>lower legs, feet</i>	<i>Often begins as small cut or insect bite. Becomes several centimeters in width, with raised edges and raw, bloody tissue in the center.</i>
4. Herpes Simplex	<i>virus</i>	<i>around mouth and genital areas</i>	<i>Red patch which then becomes cluster of small vesicles usually quite painful and may become secondarily infected.</i>

Slide Narration for Teaching Plan 6

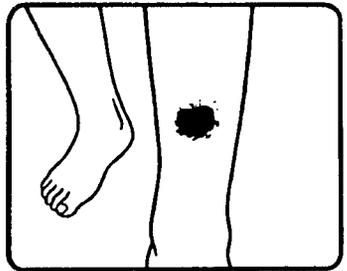
1. This slide shows cellulitis. Infections of the leg like this occur more easily when the blood does not circulate well, or if the leg is swollen.



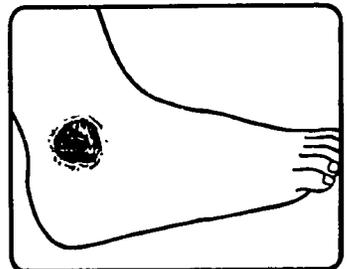
2. In this picture, you see boils on a child's neck. These boils are caused by infection of a hair follicle.



3. This is a picture of a tropical ulcer. When the legs are swollen or if there is poor circulation, tropical ulcers take a long time to heal.



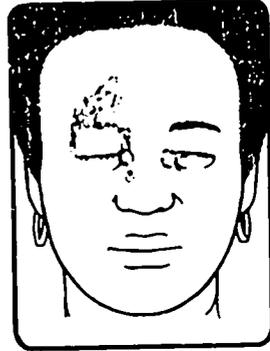
4. This tropical ulcer of the ankle will take several months to heal, even with the best treatment and care.



5. This slide shows the vesicles of herpes simplex.



6. If herpes simplex occurs on the cornea, this is a very serious problem. Send the patient to the hospital.



7. Herpes simplex can occur on the lips and on the genitals. These lesions, even when they are small, are very uncomfortable.



Teaching Plan 7

Skin Problems Never Spread by Personal Contact

- OBJECTIVES**
1. Describe the clinical picture that occurs in:
Eczema Contact dermatitis
Onchocerciasis Drug reactions
 2. Demonstrate a patient interview.
 3. Demonstrate instruction of patients and their families in the home care of these problems.

METHODS Self-instruction, discussion, role-play, slide presentation

MATERIALS Students' Text - Unit 5, slides, projector and screen, Case Study #17

PREPARATION

Select and clean slides. Check and set up projector and screen.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor leads a discussion on the signs and symptoms of:
Eczema Onchocerciasis
Contact dermatitis Skin reactions to drugs | 1 hr |
| 2. Instructor presents slides showing lesions associated with these problems. | 30 min |
| Instructor leads discussion on appearance of lesions. | 1 hr |
| 3. In small groups, some students role-play patient interviews, giving advice to patients. Other students evaluate performance, using skill checklist. | 30 min |
| 4. Students use case study exercise. | |

ANSWERS TO REVIEW QUESTIONS

Skin Problems Never Spread by Personal Contact

1. Check the descriptions that are true for eczema.

a. Infectious

b. Starts often in early childhood

c. Begins in old age

d. Not infectious

e. Occurs often in certain families

f. Children who have it often get asthma later

2. What is the typical appearance of eczema rash in young children and the usual location of these lesions?

Red, wet itchy rash with small blisters which burst and form crusts on children. This rash is usually found on the cheeks.

3. What is the appearance and location of this rash in older children and adults?

The rash is dry, itchy and rough.

The skin is thickened from chronic scratching.

The rash is located on the neck, upper trunk and the bends of elbows and knees.

4. How would you treat an adult with eczema if the lesions are dry?

Use a lubricating ointment 1% applied daily to the affected area to reduce inflammation.

5. Dermatitis is part of the clinical picture of onchocerciasis. Describe the clinical symptoms and signs associated with onchocerciasis.

1) *itching*

2) *thickened skin*

6. How does the worm that causes onchocerciasis get into the human eye?

The black fly carries the worm into the eye.

7. The drug management of onchocerciasis is diethylcarbamazine. This drug often causes reactions. Describe the steps you would take to lessen reactions to this drug.

To lessen the reaction, steroids may be given before the first dose of diethylcarbamazine. A very small dose of diethylcarbamazine is given first. The dosage is gradually increased. Chlorpheniramine, an antihistamine, can be given to lessen the itching which may develop during treatment. If the reaction is severe, the diethylcarbamazine must be stopped.

8. What would you advise community leaders to do if there is much onchocerciasis in your village?

Encourage leaders to cooperate with special black fly prevention programs.

9. List four substances that are likely to cause contact dermatitis.

1) various chemicals
2) cosmetics

3) metals
4) insecticides
(also shoes)

10. What changes occur in lesions in the different stages of contact dermatitis?

Begins with redness that becomes swollen with vesicles. Pustules may develop in more severe cases. Burning or itching is almost always present.

11. What information would help you decide that a patient has contact dermatitis and not eczema or ringworm?

A history of allergies, or a history of contact with something in the affected area and the appearance.

12. What treatment would you give a patient who had dermatitis, if the lesions were red and wet?

Cold wet compresses twenty minutes three to four times a day, until the skin is dry

13. What is the drug most commonly associated with drug reactions?

Penicillin

14. What is the first thing to do when you think a certain drug is causing a skin reaction?

Stop the drug.

15. What are the signs and symptoms of a skin reaction to drugs?

The patient develops a rash which is often patchy, red and raised and sudden in onset. Itching is usually present. In some cases marked swelling of the skin is present.

ANSWERS TO REVIEW EXERCISE

Students are to fill in the following chart without looking at their text.
They then compare their answers with the text.

PROBLEM	CAUSE	LOCATION	LESIONS
1. Eczema	<i>Allergy</i>	<i>Cheeks in young children, anterior surfaces of elbows, behind knees.</i>	<i>Dry red papules, which can develop into small blisters and crusts. May be weepy and itchy. Secondary infection.</i>
2. Contact Dermatitis	<i>Allergy or toxic reactions</i>	<i>Any area which comes in contact with foreign substance.</i>	<i>Red area on skin, with swelling and blisters. May weep and crust over. Itchy.</i>
3. Drug Reaction	<i>Allergy</i>	<i>Often generalized rash.</i>	<i>Two types of lesions: 1) raised, red patches, peeling skin 2) flat, dark, macular</i>
4. Onchocerciasis	<i>Worm that is introduced to the body by a fly.</i>	<i>One-quarter of the body across the back.</i>	<i>Small round papules</i>

Case Study #17

Name of Patient: Mixed, M.
Sex: Male
Date of Birth: 10 June 1978
Date of Visit: 3 March 1980
Urine: Normal
Vital Signs: Temperature 36.6°C
Pulse 96
Respiration 26
Weight 10.8 kg.

Medical History: The child has an itchy rash on his face. The rash is spreading. The rash started as a reddish patch on which small vesicles later appeared. The child constantly scratches the rash. Otherwise he seems well. His appetite is good. He has daily bowel movements and passes urine normally. He plays normally for his age. He sleeps normally.

Past medical history: He has had no serious problems in the past.

Family history: He is the youngest of four children. His brother, who is eight years old, gets attacks of asthma. His parents are well. His grandmother has sugar in her urine. His other three grandparents are dead. Nobody knows what they died of. One of the patient's aunts has asthma.

Physical Examination: The child looks active and well nourished. His mucous membranes are pink. His tongue is clean and moist. His tonsils are normal. His lymph glands are normal. His neck, chest, heart and abdomen are all normal. There is a reddish patch on the right cheek. This patch is covered with thin white scales. There is another patch like this on the left side of his forehead. This spreads up into the scalp.

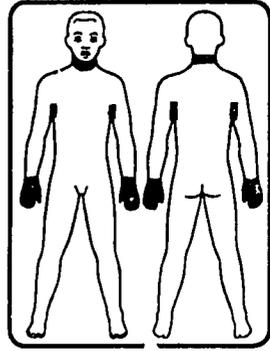
Diagnosis: Eczema

- Patient Care:**
1. Apply 1% hydrocortisone ointment to cheeks twice a day until lesions are no longer red and itchy.
 2. Give the child 2 mg chlorpheniramine at bedtime to reduce itching and help the child sleep.
 3. Use water only when washing the child's face. Avoid soap.
 4. Tell the mother this condition may last a long time.

- Diagnostic Points:**
1. Family history of allergy
 2. Location of lesions
 3. Lesions are itchy

Slide Narration for Teaching Plan 7

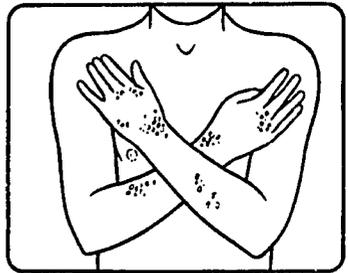
1. This slide shows the usual parts of the body on which eczema often appears.



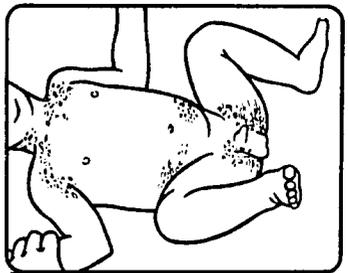
2. Young children often get eczema first on the face.



3. Eczema often appears on the wrist as well.



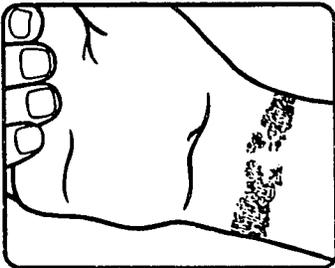
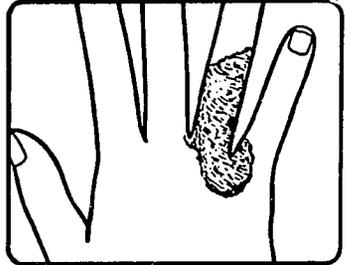
4. This picture shows a patient with eczema in the groin and around the neck.





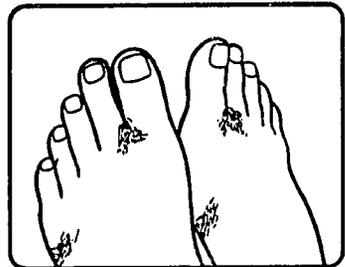
5. This is a picture of acute eczema.

6. This slide shows the lesions of onchocerciasis.

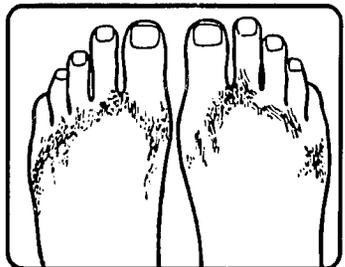


7. These lesions were caused by contact with some substance which irritated the patient's skin. Some substances will irritate anybody's skin. Other substances will only irritate a person's skin if he is especially sensitive.

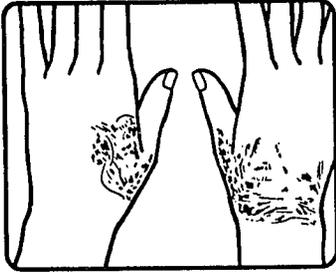
8. In this picture, you see contact dermatitis on the foot of a patient who has been wearing sandals. Possibly, a dye in the leather or the leather, itself, irritated the patient's skin.



9. Here is another example of contact dermatitis caused by sandals.

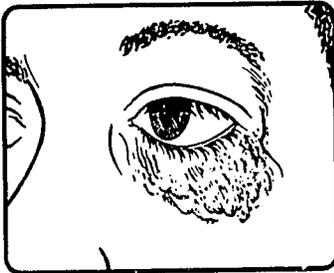
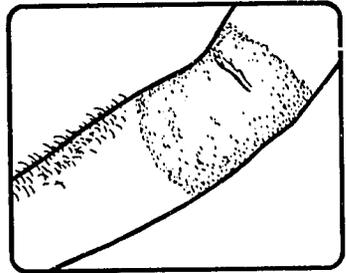


10. This slide shows a contact dermatitis from shoes.



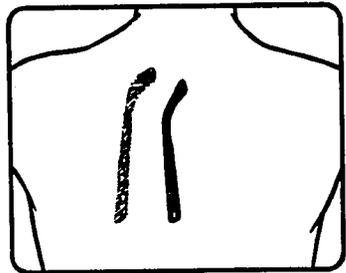
11. In this slide, you see contact dermatitis on the hand. The patient has been using some chemical that irritated his skin.

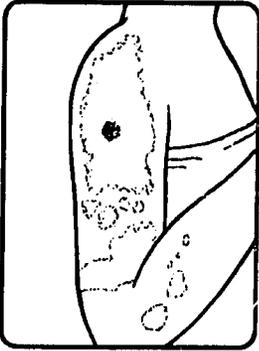
12. This case of contact dermatitis was caused by using merthiolate.



13. This contact dermatitis around the eyes was caused by using pilocarpine ointment.

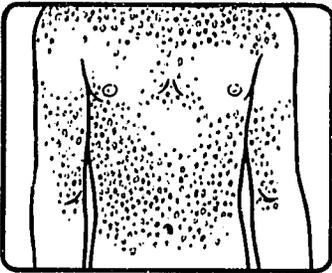
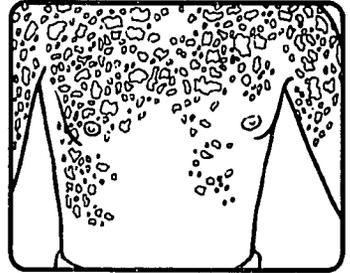
14. In this slide, you see what happened when a spectacle frame was taped to the patient's skin. The lesion has taken the shape of the frame. The patient had complained of a rash behind the ears. This test shows that the rash was caused by the spectacle frame.





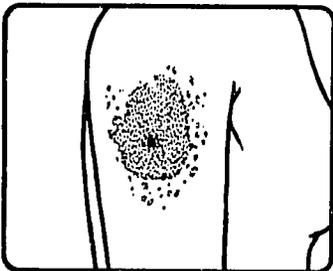
15. Now we are going to see several slides showing skin reactions to drugs. Often, the skin lesions look like this. Notice that they are large and raised above the surface of the skin.

16. This skin reaction was caused by ampicillin.



17. This skin reaction was caused by penicillin.

18. This skin reaction was also caused by penicillin.



19. This skin reaction was caused by a vaccination.

Teaching Plan 8

Diagnosing and Caring for Patients with Skin Problems; Clinical Practice

- OBJECTIVES**
1. Diagnose skin problems
 2. Perform patient care procedures, application of warm and cold soaks, incision and drainage of boils and abscesses, application of dressings.
 3. Advise patients about the home care of skin problems.

METHODS Supervised clinical practice for one and a half days

MATERIALS Skill checklists, Diagnostic and Patient Care Guides, evaluation records

PREPARATION

Arrange for the students to be supervised during one and a half days of activity in skin clinic.

TIME 1 ½ days

LEARNING ACTIVITIES

The student groups should each be assigned half a day to practice:

- a. Interviewing and examining patients
- b. Dressing, soaking, incising and draining boils
- c. Delivering health talks to individual patients or groups of patients

Teaching Plan 9

Providing Care for Patients with Skin Problems

- OBJECTIVES**
1. Diagnose all the skin problems described in this module.
 2. Properly record information about medical history, physical examination and patient care.
 3. Provide correct patient care, using the treatment described in this module.
 4. Advise patients about the home care and prevention of skin problems.

METHODS Supervised clinical practice for one week

MATERIALS Skill checklists, and Patient Care Guides, evaluation records

PREPARATION

See Students' Text, Unit 6, for entry level skills and knowledge. Since this activity will be occurring concurrently with other clinical rotations, you will probably be placing two or three students in the clinic on any given week. Arrange for supervision during this activity.

TIME: 1 week

LEARNING ACTIVITIES

1. Students obtain medical histories and perform physical examinations.
2. Students diagnose skin problems.

-
- | | |
|--|--|
| <ol style="list-style-type: none">3. Students apply dressings and soaks. Students observe and practice incision and drainage of boils.4. Students present health messages to individual patients or groups of patients.5. Students are evaluated at least twice on all the above activities. | |
|--|--|

Teaching Plan 10

Assisting a Community to Care for and Prevent Skin Problems

- OBJECTIVES**
1. Provide clinical services to people who suffer from skin problems.
 2. Identify infectious skin problems and plan a program to prevent them from occurring and spreading.
 3. Advise the community about its role in preventing skin problems.
 4. Identify other members of the health team who can assist in prevention.

METHODS Practice providing patient care, assessing the community, and training community health workers

MATERIALS Community Experience Log Book, reference materials

PREPARATION

See Student Guide in Students' Text Unit 7 for details of entry level skills and knowledge. See Instructors Preparation Manual for details on organization and supervision of community practice.

TIME

LEARNING ACTIVITIES

1. Students provide clinical services for skin problems.
2. Students assess the number of skin diseases in the community spread by personal contact. They record their findings in a written report.

Included in three months of community experience.

-
- | | |
|---|--|
| <ol style="list-style-type: none">3. Plan activities that will assist the community to reduce the occurrence of skin problems.4. Begin training a community health worker to care for skin problems.5. Instructor evaluates student performance in the community. | |
|---|--|

The MEDEX Primary Health Care Series

**Common Problems
DENTAL, EYE, EAR,
NOSE, AND THROAT**

Instructor's Manual

© 1982

**Health Manpower Development Staff
John A. Burns School of Medicine
University of Hawaii, Honolulu, Hawaii, U.S.A.**

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SCHEDULE

Common Problems - DENTAL, EYE, EAR, NOSE AND THROAT

DAY 1	DAY 2	DAY 3	DAY 4
<p>Introduction to Dental, Eye, Ear, Nose, and Throat (DEENT) module</p> <p>Teaching Plan 1: Signs of Abnormal Eye Conditions</p> <p>Teaching Plan 2: History of Eye Problems</p>	<p>Teaching Plan 4: Care of Patients with Eye Problems</p> <p>Presentation and discussion of conjunctivitis, sty, trachoma, eye emergencies, foreign body in eye, corneal ulcer or cut, vitamin A deficiency, cataracts</p>	<p>Teaching Plan 5: Prevention of Blindness in the Community; Community health message</p>	<p>Teaching Plan 7: Signs of Abnormal Dental and Mouth Conditions</p> <p>Teaching Plan 8: History of Dental and Mouth Problems</p>
<p>Teaching Plan 3: Medical History and Physical Examination of Patients with Eye Problems; Clinical Practice</p>	<p>Teaching Plan 4 (continued): Case study practice</p> <p>Advising patients (role-play)</p>	<p>Teaching Plan 6: Community Health Message: Promoting Good Dental Health in the Community</p>	<p>Teaching Plan 9: Medical History and Physical Examination of Patients with Dental and Mouth Problems; Clinical Practice</p>

Clinical Rotation: One week DEENT clinic - Teaching Plan 16
 Community Phase: Three months - Teaching Plan 17

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DAY 5	DAY 6	DAY 7	DAY 8
<p>Teaching Plan 10: Care of Patients with Dental and Mouth Problems</p> <p>Presentation and discussion of canker sores, gingivitis, acute ulcerative gingivitis, tooth decay, dental abscess</p>	<p>Teaching Plan 11: Signs of Abnormal Ear, Nose, Sinus, and Throat Conditions</p> <p>Teaching Plan 12: History of Ear, Nose, Sinus, and Throat Problems</p>	<p>Teaching Plan 14: Care of Patients with Ear, Nose, Sinus, and Throat Problems</p> <p>Presentation and discussion of upper respiratory infection, acute otitis media, chronic otitis media, mastoiditis, external otitis, wax in ear, acute sinusitis, acute bacterial tonsillitis</p>	<p>Teaching Plan 15: Clinical Practice</p> <p>Group A - Interviewing patients</p> <p>Group B - Presenting health messages</p> <p>Group C - Patient care</p>
<p>Teaching Plan 10 (continued): Case study practice</p> <p>Advising patients (role-play)</p>	<p>Teaching Plan 13: Medical History and Physical Examination of Patients with Ear, Nose, Sinus, and Throat Problems</p>	<p>Teaching Plan 14: (continued): foreign body in ear, nose and throat, and nose bleed</p> <p>Case study practice</p> <p>Advising patients (role-play)</p>	<p>Teaching Plan 15: Clinical practice</p> <p>Group A - Patient care</p> <p>Group B - Interviewing patients</p> <p>Group C - Presenting health message.</p>

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DAY 9	DAY 10	DAY 11	
<p>Teaching Plan 15: Clinical practice</p> <p>Group A - Presenting health messages</p> <p>Group B - Patient care</p> <p>Group C - Interviewing patients</p>	<p>Teaching Plan 15: Clinical Practice</p> <p>Students complete or review practice interviewing and examining patients, providing patient care, and presenting health messages.</p>	<p>Posttest</p>	
<p>Teaching Plan 15: Clinical Practice</p> <p>Students complete or review practice interviewing and examining patients, providing patient care, and presenting health messages.</p>	<p>Teaching Plan 15 (continued): Clinical practice</p> <p>Individual or group review of skills interviewing and examining patients, providing patient care, and presenting health messages.</p>		

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Teaching Plan 1

Signs of Abnormal Eye Conditions

- OBJECTIVES**
1. Recognize signs of abnormal eye conditions:
Inflammation of the conjunctiva over the sclera
Inflammation around the iris
Inflammation of the conjunctiva inside the upper eyelids
Dry eyes
Bitot's spots
Foreign body
Irregularly shaped pupils
Dilated pupil when the other is constricted
Constricted pupil when the other is dilated
 2. Identify abnormal eye signs when you see them in a patient or in a photograph.

METHODS Self-instruction, discussion, slide presentation

MATERIALS Student Text- Unit 1, slides, projector, screen

PREPARATION Complete your analysis of pretest results. Assign each student to a working group of three to four persons. Students in each group will work together for the two weeks this module is taught. Each group should include students with high pretest scores and students with low pretest scores.
Select and clean slides. Check and set up projector and screen.

TIME: 1 hr 20 min

LEARNING ACTIVITIES	
1. The instructor will introduce and explain the Task Analysis Table.	15 min.
2. Instructor presents slides on anatomy and physiology of the eye.	30 min

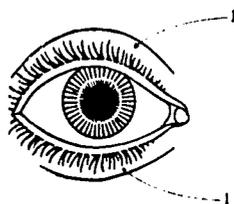
	<u>TIME</u>
3. Instructor presents slides showing abnormal signs. Students should write down the abnormal signs shown on the slides. The instructor then leads discussion on the differences among the signs of eye problems.	35 min
4. The instructor evaluates students' knowledge with an informal posttest.	10 min

Slide Narration

Anatomy and Physiology of the Eye

This is a presentation on the anatomy and physiology of the eye. You should have before you a Student Response Sheet for answering questions. I will ask you to answer questions on your response sheet after each topic. These questions will help you check your understanding of the anatomy and physiology of the eye.

The eyelids are folds of skin that keep the eye moist and protect it from injury. Here you see a simple drawing of the eye. The arrows numbered 1 point to the eyelids.



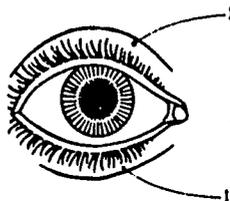
In this photograph of the eye, the arrows numbered 1 point to the eyelids.



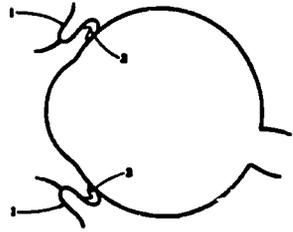
Go to the first question on your response sheet, numbered with a circled 1. To the right of your response sheet, you will see the same picture as shown on the slide. Draw arrows pointing to the eyelids and number the arrows with a 1.



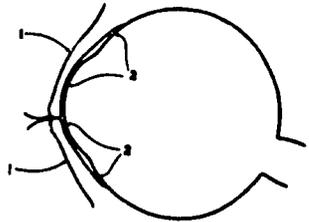
If you placed your arrows numbered 1 on the first picture of your response sheet as they appear in this picture, you understand where the eyelids are located.



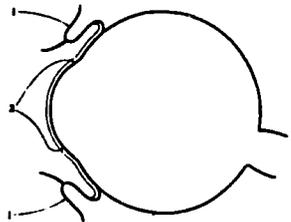
Tears keep the covering of the eye from drying and help to wash away dust. Here you see the tears, colored blue and numbered 2, under the eyelids which are numbered 1.



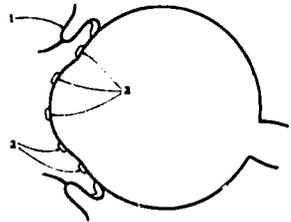
When the eyelids close, they carry the tears down over the front of the eye.



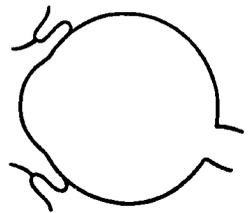
When the eyelids open, the tears remain on the front of the eye for a few seconds before drying.



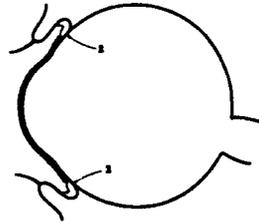
As the tears start to dry, the process starts again. The eyelids carry a fresh supply of tears over the front of the eye.



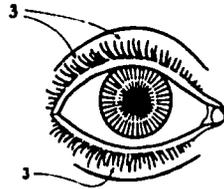
Go to the second question on your response sheet numbered with a circled 2. To the right of your response sheet you will see a picture as shown in this slide. Draw tears in the place they are found before the eyelids close to moisten the eye. Label what you have just drawn with arrows numbered with a 2. Then draw a heavy line over the part of the eye that is covered with tears when the eyelids close.



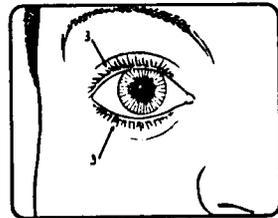
If you placed your arrows numbered 2 and drew a heavy line in the same place on your picture as here, you understand where the tears are located before the eye is moistened and the part of the eye which is moistened when the eyelids close.



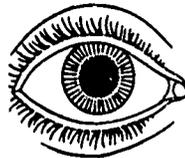
The eyelashes are the hairs that grow from the edge of the eyelids, shown here by arrows numbered 3. Eyelashes also help to protect the eye.



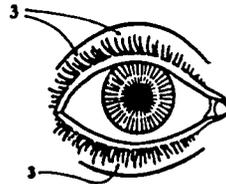
Here you see that the arrows numbered 3 point at the eyelashes.



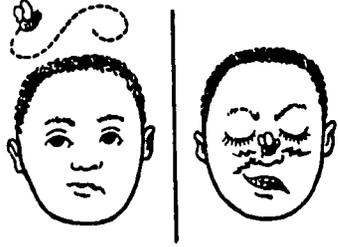
Go to the third question on your response sheet numbered with a circled 3. To the right of your response sheet you will see a picture as shown in this slide. Draw arrows pointing to the eyelashes and number the arrows with a 3.



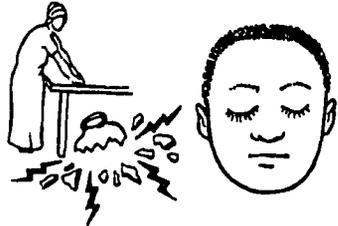
If you placed your arrows numbered 3 on the third picture of your response sheet in a similar position as shown on this slide, you understand where the eyelashes are located.



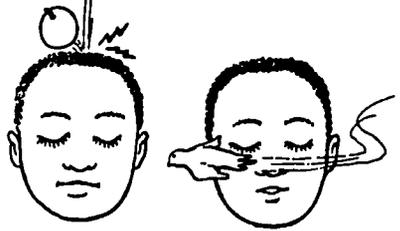
The eyelids and eyelashes help to protect the eyes from injury. When a person sees something near him which he knows can injure his eyes, as shown here to the left, he will close his eyelids to protect his eyes, as shown here on the right.



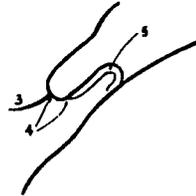
A blink reflex action will also cause a person to close his eyelids to protect the eyes. This reflex action is automatic. The person does not even realize he is closing his eyes. A sudden loud noise will trigger a blink reflex. The eyelids shut to protect the eyes from possible injury.



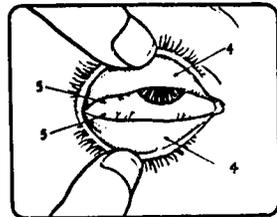
Sudden pain will also trigger the blink reflex that closes the eyelids, as seen here on the left. Sudden movement in front of the face triggers the blink reflex, as seen on the right.



In this picture, the lid margin is numbered 4. You can find it between the eyelashes, numbered 3, and the conjunctiva inside the eyelid, numbered 5 and colored pink.



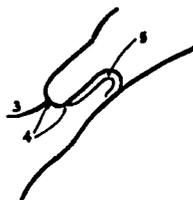
Here you see the upper and lower lid margins numbered 4 and the conjunctiva covering the inside of the upper and lower eyelids, numbered 5.



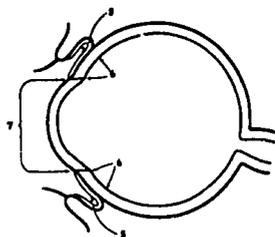
Go to the fourth question on your response sheet numbered with a circled 4. To the right of your response sheet, you will see a picture like the one shown in this slide. Number the eyelash with a 3. Show where the lid margin is located with arrows numbered 4. Show where the conjunctiva is located underneath the eyelid, by drawing a heavy line. Draw arrows pointing to the line you have shown as the conjunctiva and number the arrows with a 5.



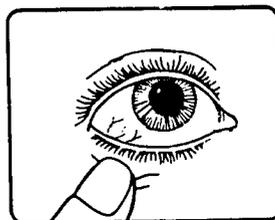
If you placed your number 3, your arrows numbered 4 and 5, and a heavy line similar to the numbers and line shown here in pink, you have a good understanding of where the lid margin is located in relationship to the eyelashes and the conjunctiva that covers the underside of the eyelid.



The conjunctiva not only covers the inside of the eyelids, but also part of the eye. Because the conjunctiva is full of blood vessels, the conjunctiva covering the underside of the eyelids is pink. This part of the conjunctiva is numbered 5 and colored pink. The conjunctiva also covers the sclera, or white part of the eye, shown here with arrows numbered 6. The conjunctiva stops at the cornea, numbered 7.



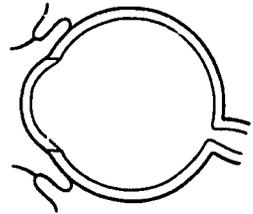
Here you can see the blood vessels in the conjunctiva covering the sclera or white part of the eye.



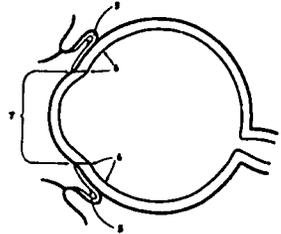
Here you can see even more clearly the conjunctiva covering the sclera. The blood vessels inside the conjunctiva are dilated because the conjunctiva is infected.



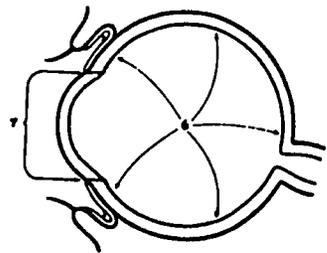
Go to the fifth question on your response sheet numbered with a circled 5. To the right of your response sheet, you will see a picture like the one shown in this slide. Show where the conjunctiva is located by drawing a heavy line over the surface the conjunctiva covers. Mark the line with arrows numbered 5. Mark the location of the sclera with arrows numbered 6 and the location of the cornea with arrows numbered 7.



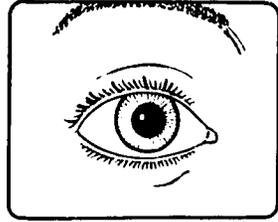
If you drew a heavy line similar to the one shown here in pink and drew arrows numbered 5, 6, and 7 pointing to the same locations as shown here, you have a good understanding of the location of the conjunctiva, sclera, and the cornea.



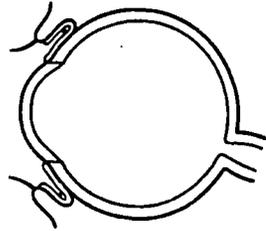
The sclera, or white part of the eye, is made up of a tough supporting tissue which maintains the shape of the eyeball. The sclera, numbered 6, covers all of the eye except the front part of the eye covered by the cornea, numbered 7, and the area where the optic nerve enters the rear of the eyeball.



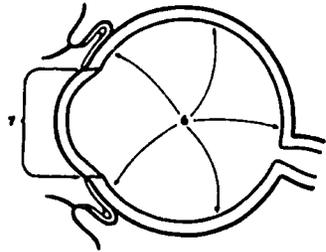
Here you see the sclera, or white part of the eye.



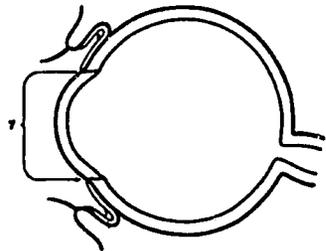
Go to the sixth question on your response sheet numbered with a circled 6. To the right of your response sheet you will see a picture like the one shown in the slide. Show where the sclera is located by drawing arrows numbered with a 7. Show where the cornea is located in relationship to the sclera by drawing arrows numbered with a 6.



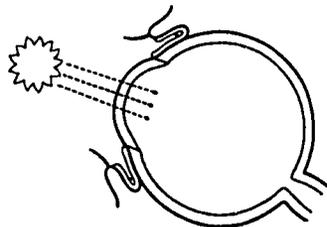
If you placed your arrows numbered 6 and 7 as shown in this slide, you have a good understanding of the location of the sclera in relationship to the cornea.



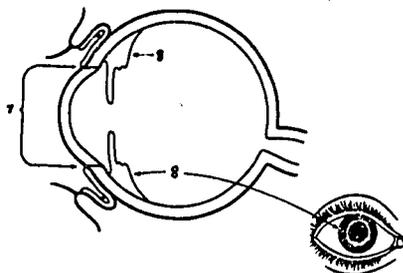
The cornea, numbered 7, is the clear covering over the front of the eye.



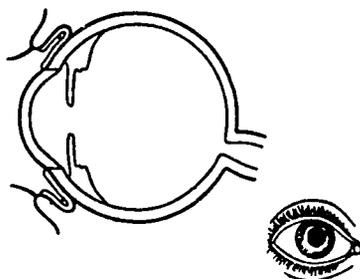
The cornea is clear. It allows light to enter the eye.



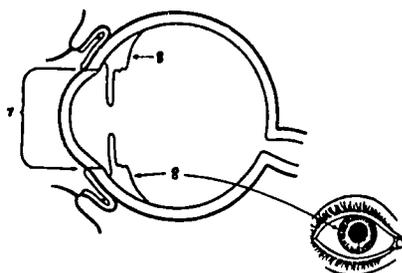
The iris is the circular colored muscle, here seen as brown and numbered 8, which lies beneath the cornea, numbered 7.



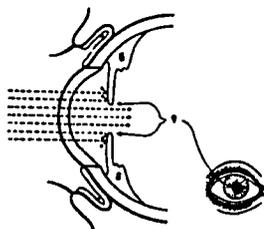
Go to the seventh question on your response sheet numbered with a circled 7. To the right of your response sheet you will see a drawing like the one shown in this slide. On the left hand picture, draw arrows, numbered with a 7, pointing to the location of the cornea. On both pictures draw arrows, numbered with an 8, pointing to the location of the iris.



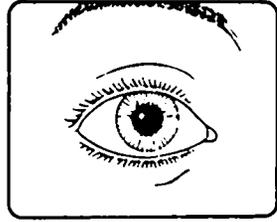
If you placed your arrows numbered 7 and 8 as shown in this slide, you have a good understanding of the location of the cornea and iris in relationship to each other.



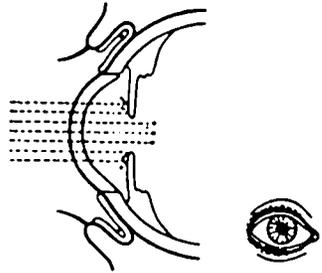
The iris, colored brown and numbered 8, controls the amount of light that passes through the pupil, numbered 9, the black circular opening in the center of the iris.



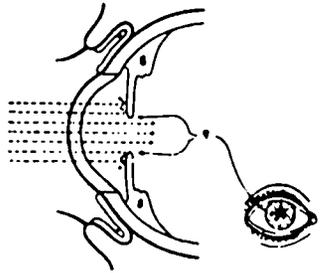
Here you see the circular iris muscle as blue. The black circular opening in the center of the iris is the pupil.



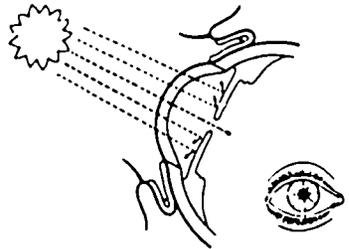
Go to the eighth question on your response sheet numbered with a circled 8. On the left of your response sheet, you will see a picture like the one shown on this slide. On the left hand picture number the iris with an 8. On both pictures draw arrows numbered with a 9 pointing to the location of the pupil.



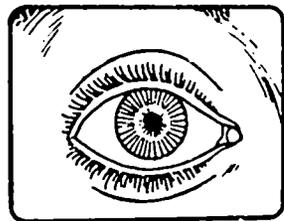
If you placed your number 8 and your arrows numbered 9 as shown in this slide, you have a good understanding of the location of the iris and pupil in relationship to each other.



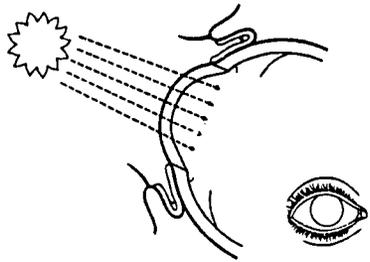
The iris controls the amount of light that passes through the pupil. Where there is too much light, as shown here, the iris makes the pupil smaller. This cuts down on the amount of light entering the eye through the pupil.



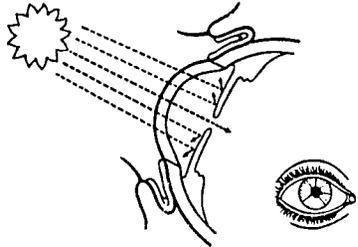
Here you see a constricted pupil which allows less light to enter the eye.



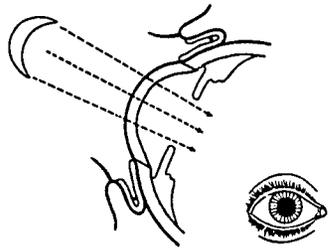
Go to the ninth question on your response sheet numbered with a circled 9. To the right of your response sheet, you will see a picture like the one shown on this slide. Complete the drawing of the iris on both pictures to show its size when the pupil is constricted.



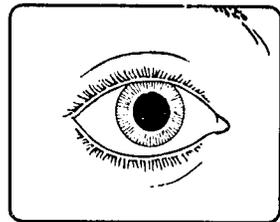
If you completed your drawing of the iris in a size similar to the one shown here, you have a good understanding of the size of the iris and pupil when the pupil constricts to cut down the amount of light that enters the eye.



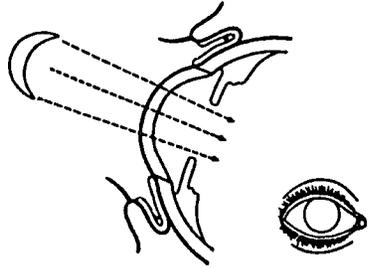
In dim light, the iris dilates the pupil, making it larger. This allows more light to enter the eye.



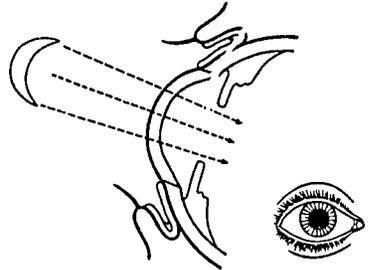
Here you see a dilated pupil, allowing more light to enter the eye. If you are thinking that the pupil should be constricted, or small, because so much light is shining on the eye, you are correct. The iris has not had enough time to react to the bright flash of the camera and constrict the pupil.



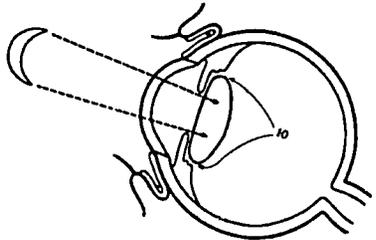
Go to the tenth question on your response sheet numbered with a circled 10. To the right of your response sheet, you will see a picture like the one shown on this slide. Complete the drawing of the iris on both diagrams to show the approximate size of the iris when dilating the pupil to let more light enter the pupil.



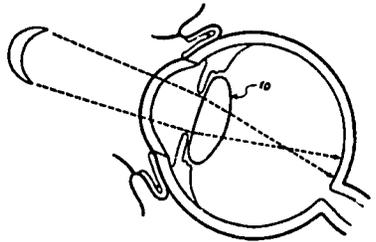
If your drawing of the iris is like the one shown here, you have a good understanding of the size of the iris and pupil when the pupil is dilated to allow more light to enter the eye.



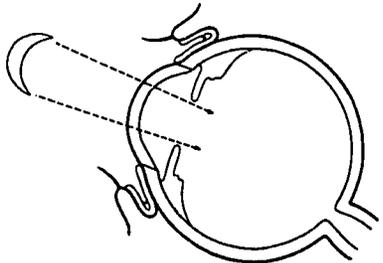
The lens, numbered 10, lies behind the iris and the pupil. After light passes through the pupil, it enters the lens.



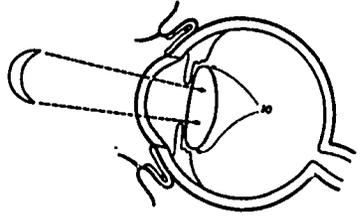
Light is focused as it passes through the lens so you can see a clear picture.



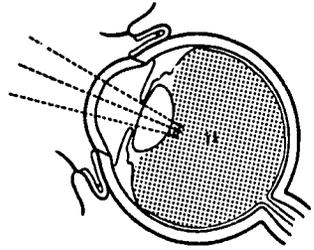
Go to the eleventh question on your response sheet numbered with a circled 11. To the right of you response sheet, you will see a picture like the one shown on this slide. Draw the lens in its proper location and label it with a 10.



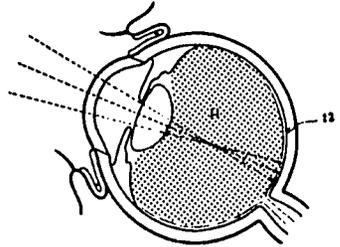
If you completed your drawing of the lens and numbered it with a 10 as shown here, you have a good understanding of the location of the lens.



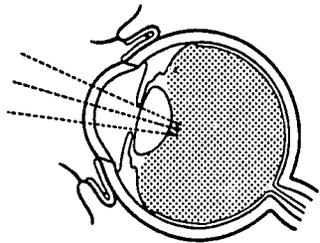
Light which has been focused passes from the lens into the vitreous humor, seen here in gray and numbered 11. The vitreous humor is a clear jelly-like fluid inside the eye which helps to maintain the round shape of the eyeball.



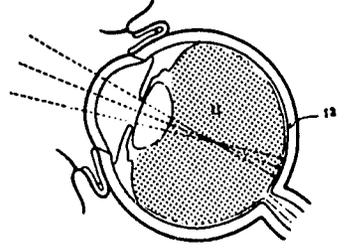
After the focused light has passed through the vitreous humor, it strikes the retina, seen here in orange and numbered 12. Nerves in the retina pass the impulses from the focused light to the brain through the optic nerve.



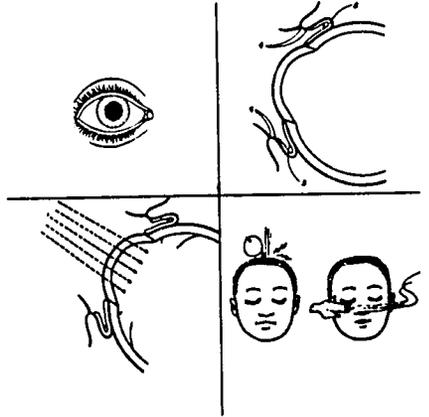
Go to question twelve on your response sheet numbered with a circled 12. To the right of your response sheet, you will see a picture like the one shown on this slide. Draw a heavy line over the part of the eye which is covered by the retina. Draw arrows pointing to this line and number the arrows with a 12. Shade in the part of the eye where the vitreous humor is found and label this area with the number 11.



If you completed your drawing of the retina, labeled 12, and the shaded area where the vitreous is located, labelled 11, and it is similar to what is shown here, you have a good understanding of the location of the retina and the vitreous.



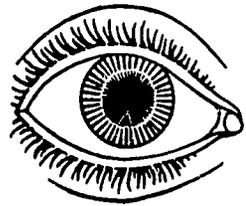
Now that the presentation of the anatomy and physiology of the eye has been completed, test yourself to see how many of the major points you can remember. This exercise will help you identify points in which you may need review or assistance.



Student Response Sheet for Slide Narration Anatomy and Physiology of the Eye

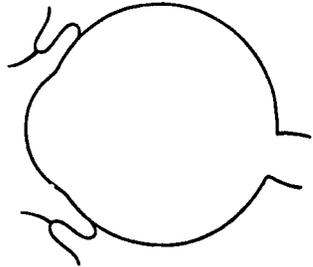
① _____

On the picture to the right, draw arrows pointing to the eyelids and number the arrows with a 1.



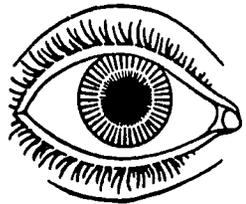
② _____

On the picture to the right, draw tears in the place they are found before the eyelids close to moisten the eye. Label what you have drawn with arrows numbered with a 2. Then draw a heavy line over the part of the eye that is covered with tears when the eyelids close.



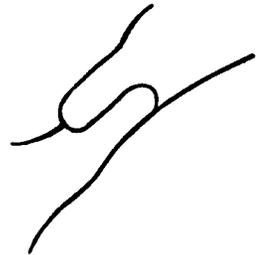
③ _____

On the picture to the right, draw arrows pointing to the eyelashes and number the arrows with a 3.



④ _____

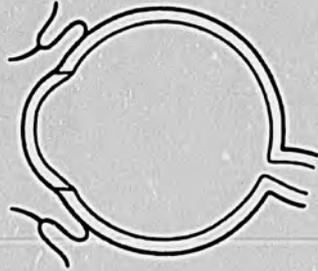
On the picture to the right, number the eyelash with a 3. Show where the lid margin is located with arrows numbered 4. Show where the conjunctiva is indicated underneath the eyelid, by drawing a heavy line. Draw arrows pointing to the line you have drawn as the conjunctiva and number the arrows with a 5.



75

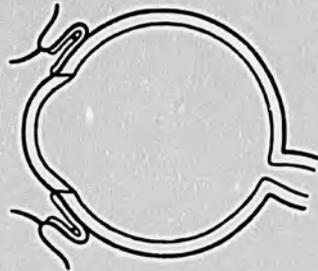
5 _____

On the picture to the right, show where the conjunctiva is located by drawing a heavy line over the surface the conjunctiva covers. Mark the line with arrows numbered 5. Mark the location of the sclera with arrows numbered 6 and the location of the cornea with arrows numbered 7.



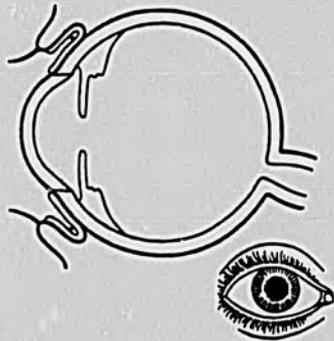
6 _____

On the picture to the right, show where the sclera is located by drawing arrows numbered with a 7. Show where the cornea is located in relationship to the sclera by drawing arrows numbered with a 6.



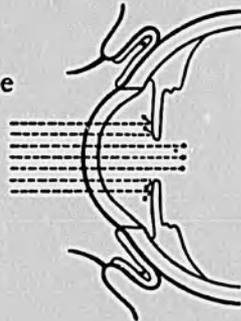
7 _____

On the left hand picture, draw arrows numbered with a 7 pointing to the location of the cornea. On both pictures, draw arrows numbered with an 8, pointing to the location of the iris.



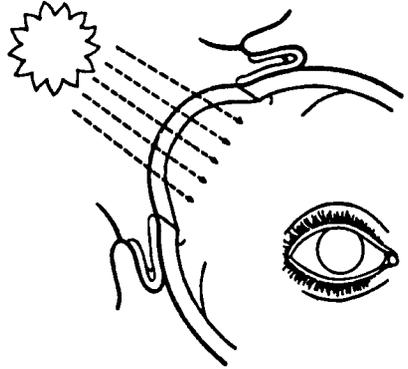
8 _____

On the left hand picture, number the iris with an 8. On both pictures draw arrows numbered with a 9 pointing to the location of the pupil.



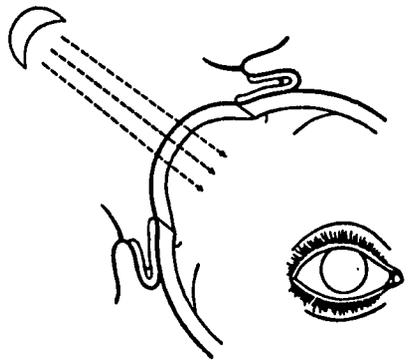
9 _____

Complete the drawing of the iris, on both pictures to show the approximate size of the iris when constricting the pupil and blocking some of the light from entering the pupil.



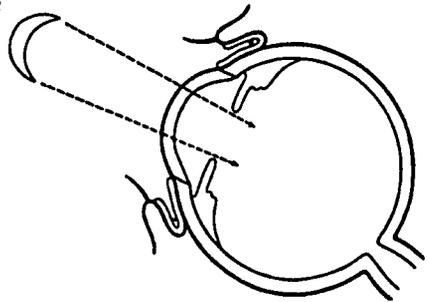
10 _____

Complete the drawing of the iris, on both pictures to show the approximate size of the iris when dilating the pupil to let more light enter the pupil.



11 _____

On the picture to the right, draw in the lens in its proper location and label the lens with a 10.



ANSWERS TO REVIEW QUESTIONS

Assessing Patients With Eye Problems

1. List the three most common symptoms of an eye problem.
 - a. *trouble seeing (blurry vision or loss of vision)*
 - b. *eye pain*
 - c. *red eye*

2. List as many abnormal eye signs as you can remember from what you have read. Check your answers against the text.
 - a. *Eyes move in different directions at the same time*
 - b. *Swelling or redness of the eyelids or margins*
 - c. *Any inflammation of the conjunctiva*
 - d. *Inflammation around the iris*
 - e. *The eyes look dry.*
 - f. *Plaques of gray material on the sclera (Bitot's spots).*
 - g. *Foreign body.*
 - h. *A pupil with an irregular shape*
 - i. *A pupil which remains small after the light is removed*
 - j. *A pupil which is larger in one eye and remains larger than the other pupil when light is shined into the eyes*
 - k. *Irregular surface of the cornea*
 - l. *The lens appears gray or white when a light is shined directly into the patient's eye*
 - m. *Any difficulty seeing.*

3. During your physical examination of a patient's eyes, you will identify and record abnormal findings. Samples of abnormal findings are given here. Next to each abnormal finding, explain what eye problem might have caused it.

FINDING	SIGN OF
a. Mild inflammation of conjunctiva of one eye, equal over inside of lids and sclera. The surface of the cornea is irregular.	<i>Corneal laceration or ulcer, or foreign body</i>
b. Inflammation mainly of the conjunctiva inside the upper eyelid of one or both eyes.	<i>Acute trachoma</i>
c. Inflammation around the iris of one eye.	<i>Eye emergency</i>
d. Inflammation of the entire conjunctiva seen usually in both eyes.	<i>Acute conjunctivitis</i>
e. Eyes look dry or there are plaques of gray material, Bitot's spots, on the sclera.	<i>Vitamin A deficiency</i>
f. One pupil is larger than the other when exposed to the same amount of light.	<i>Eye emergency</i>
g. One pupil remains smaller than the other and may be irregular when exposed to dim light.	<i>Eye emergency</i>

Teaching Plan 2

History of Eye Problems

- OBJECTIVES**
1. Interview a fellow student to obtain information about his eye problem.
 2. Record findings of interview and examination on official forms in the recommended way.
- METHODS** Self-instruction, discussion, interviewing practice
- MATERIALS** Student Text - Unit 1, record forms
- PREPARATION** Identify patients with eye problems and ask them to come to class.

TIME: 1 hr 30 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Instructor demonstrates how to take the history of a patient's eye problem. | 30 min |
| 2. a. Students practice taking medical histories from other members of their work groups. For this activity, students will use case studies in Unit 2 as a basis for role-play. After each interview, students will be evaluated by members of their work group. | 1 hr |
| b. If patients are available, they will be brought into the classroom for students to interview and examine. | |

Teaching Plan 3

Medical History and Physical Examination of Patients with Eye Problems: Clinical Practice

- OBJECTIVES**
1. Interview a patient and obtain information about his eye problem.
 2. Examine a patient with an eye problem using the proper procedure.
 3. Record findings of an interview and examination on official forms in the recommended way.
- METHODS** Clinical demonstrations, clinical practice
- MATERIALS** Skill checklists for medical history and physical examination of eye problems, record forms
- PREPARATION** Arrange for students to spend two hours in the eye clinic with suitable supervision.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|-------------|
| 1. Instructor demonstrates how to interview and examine a clinic patient. | 15 min |
| 2. Students interview and examine patients with eye problems, using the skill checklist as a guide to correct performance. | 1 hr 45 min |
| 3. Students present their findings to the class. Instructor and class comment on these findings. | 1 hr |

Teaching Plan 4

Care of Patients with Eye Problems

OBJECTIVES	<ol style="list-style-type: none">Describe the clinical picture that occurs in: Sty Foreign body in eye Conjunctivitis eye Trachoma Cuts and ulcers in the cornea Cataracts the cornea Vitamin A deficiency Eye emergenciesDemonstrate how to interview and examine patients; identify eye problems.Describe treatment and care for patients suffering from eye problems.Show patients and members of their families how to care for and prevent eye problems.Demonstrate how to clean the eye, apply eye ointment and eye drops, and locate and remove a foreign body from the eye.
METHODS	Discussion, self-instruction, case study exercises, role-play
MATERIALS	Student Text - Unit 2; material for cleaning the eye, applying medication and removal of a foreign body; and case studies 1, 2, 3, and 4.

TIME: 6 hrs 15 min

LEARNING ACTIVITIES

1. Instructor makes a presentation and leads discussion on the signs and symptoms of eye problems listed under the objectives.	1 hr 30 min
2. Instructor demonstrates how to clean the eye, apply eye ointment and eyedrops, and locate and remove a foreign body from the eye.	1 hr 30 min

	TIME
Students practice the procedures using skill checklists as a guide.	
3. Students work in small groups. Each group works on case study exercises.	1 hr
4. Each group presents its case study findings for discussion and comment by the instructor and the class.	30 min
5. Instructor assigns each work group one or two eye problems from Unit 2. Group members take turns playing the roles of community members, health workers, or observers.	1 hr 30 min
6. Each student is rated on his ability to advise on home care and the prevention of eye problems. The observer completes the skill checklist as he rates the performance of another student.	
7. Instructor leads discussion on the role-play.	15 min

ANSWERS TO REVIEW QUESTIONS

Eye Problems

- List two reasons why you should properly clean a patient's eyelids before applying any eye medication.
 - Cleaning will help the eyes heal faster.*
 - Cleaning helps prevent the infection from spreading to others.*
- When cleaning a patient's eyelids, you should: (Check the correct answers.)
 - a. Use only a dry, sterile applicator
 - b. Use sterile saline on a sterile applicator
 - c. Scrub off the crusts using pressure
 - d. Gently scrub off the crusts
 - e. Start near the nose and clean toward the ear
 - f. Start near the ear and clean toward the nose
- Washing your hands with soap and water is always important when caring for a patient. If you are about to clean a patient's eyes, when should you wash your hands? (Check the correct answer.)
 - a. Before starting to clean the eyes
 - b. After cleaning the eyes
 - c. Both before and after cleaning the eyes
- You have decided that a child has a bacterial conjunctivitis. You want to apply 1% tetracycline eye ointment. On your stock shelf you find two boxes with tubes of 1% tetracycline eye ointment. The expiration date for the ointment in one box is September 1981. The expiration date for the ointment in the second box is June 1982. From which box would you select a tube of ointment if today's date was 10 August 1981? Why?

Ointment from the September 1981 box. Because drug supplies are limited, you can avoid waste by using drugs with the earliest expiration dates first.
- Where on the eye should eyedrops or ointment be applied?

On the conjunctiva covering the inside of the lower eyelid near the lid margin.

6. What would you do if the eyedrops run out of the eye or the ointment slides out of the eye before the lid closes?

Repeat the procedure

7. Write in the information that would help you to make the diagnosis of a sty.

Presenting complaint: *Pain on the eyelid*

Patient history: *May have had a sty before*

Physical examination: *A tender, red lump on the margin of the eyelid*

8. What is a complication of severe conjunctivitis?

Corneal ulcer, or scarring of the cornea

9. A trachoma infection easily spreads from person to person. List three examples of how trachoma spreads.

a. *Flies*

b. *Towels and clothing used by people who have trachoma*

c. *Close contact with a person who has trachoma*

10. Suppose you find that many people are coming to your health center with trachoma. These people live in the same community. What could you and members of your health team do to decrease the spread of trachoma in this community?

Examine family members and school children for signs of trachoma. Educate family members, school children and teachers concerning the spread of the problem. Encourage good personal hygiene and fly control.

11. You diagnose a child's eye problem as advanced trachoma. The child weighs 50 kg. You decide to treat the child with sulfadiazine. Use your Patient Care Guide to answer these questions.

a. How many grams of sulfadiazine would you give the child for his first dose?

3 g

b. How many grams of sulfadiazine would you give the child during one of the four doses to be given in a day?

1.5 g

12. A sixty-seven year old man comes to you complaining that "things look blurry." In response to your questions, he says his problem has been getting worse during the last six months. When he closes one eye at a time, the problem seems to be his right eye. He has not had any pain or redness in his right eye recently. He said that he did get something in his right eye about a month ago, but he washed it out himself. He thinks that maybe his mother had the same problem when she got old, but she didn't believe in doctors so she never went to see anyone about her problem.

His vital signs are normal. A general physical examination shows that he is healthy for his age. An eye chart test shows you he has minor problems seeing with his left eye, but has much more difficulty seeing with his right eye. You find nothing abnormal when examining the left eye. When you shine your flashlight on the lens of the right eye, the lens looks milky white. This is the only abnormal finding of the right eye.

- a. What do you suspect the problem to be?

Cataract

- b. How would you care for this patient?

Explain that surgery may help. Suggest that the patient see a doctor.

13. Describe the symptoms of vitamin A deficiency in a child.

a. Presenting complaint: *Any indication that the child is having difficulty seeing at night.*

b. Patient history: *Recent illness or malnutrition.*

c. Physical examination: *Early stages: dryness of the eyes, dull surface of conjunctiva. Later stages: little plaques of gray material called Bitot's spots.*

14. What is the best way to prevent vitamin A deficiency in children?

Feed them foods which contain vitamin A.

15. You should always suspect vitamin A deficiency in some children. How can you know which children these are?

Any child who has been ill or malnourished. Any child who has had difficulty seeing at night.

16. Describe the two most important symptoms of an acute eye emergency.
- Pain*
 - Loss of vision*
17. You have found a foreign body in a patient's eye. Write two reasons why you might have to send this patient to a hospital.
- The presence of corneal injury.*
 - The foreign body cannot be removed from the eye.*
18. Injury of the cornea is an emergency because it can quickly lead to scarring and permanent blindness.
19. Can conjunctivitis cause a corneal ulcer? (Check the correct answer.)
- a. No, even if it is a severe conjunctivitis.
- b. Yes, if it is a severe conjunctivitis.
20. A young man has come in with a urethral discharge and you suspect that he has gonorrhea. This is the first time you have seen this patient. He tells you that he has had this problem before. While telling the patient that his wife will have to come in for treatment, you find out that his wife just had a baby two days ago. The baby was delivered at home.
- What problem do you suspect the baby may have?
Gonorrheal conjunctivitis
 - What could happen to the baby if this problem goes untreated?
Severe conjunctivitis can cause corneal ulceration. Scarring of the cornea can cause blindness.
 - What medicine can be put into the eyes of newborns to prevent this problem?
Put 1% silver nitrate or 1% tetracycline eye ointment into the child's eyes.

Case Study 1

Name of Patient: Field, Stella
Sex: Female
Date of Birth: 29 June 1941
Date of Visit: 7 December 1979
Urine: Normal
Vital Signs: Temperature 36.5° C
 Pulse 82
 Respirations 22
 Weight 73 kg

Presenting Complaint and Medical History: The patient says her right eye has been painful for one week. The pain is gradually growing worse. Now it is a jabbing pain. She first felt the pain at the beach. She thinks some dust or sand got into her eye, but she did not pay any attention to it. Nothing seems to ease the pain. Wind or breeze in her eye hurts. A watery discharge is visible. Her vision is slightly blurred. She feels a slight, dull headache. Light causes discomfort. She has no cough. Her appetite is good. Her bowels are regular. Her urine shows no sign of problems.

Physical Examination: The pupils of her eyes are normal. The conjunctiva membrane and sclera of her right eye are red. Her tongue is moist. Her tonsils are normal. Her breath sounds normal. Her chest, heart, and abdomen are normal.

A gray spot is on the eye. The spot is not a foreign body.

Diagnosis: Corneal ulcer caused by a foreign body

Patient Care: 1. Check the eye for a foreign body. See Patient Care Guide.

2. Apply tetracycline eye ointment.
3. Patch both eyes.
4. Refer the patient to a hospital.

Diagnostic Points: 1. A lesion was found on the cornea.
2. Patient told of her visit to a beach.

Case Study 2

Name of Patient: Ryan, Fred
Sex: Male
Date of Birth: 24 January 1963
Date of Visit: 12 July 1979
Vital Signs: Temperature 37.1° C
Pulse 72
Respirations 22
Blood Pressure 110/80
Weight 61 kg

Presenting Complaint and Medical History: Patient Fred Ryan has had an inflamed left eye for the past three days. The problem began suddenly. He woke one morning with the pain in his eyes. He says the pain feels like sand in his eyes. The problem stays the same. It is not getting better or worse. He cannot think of anything that aggravates the eye. The patient says a watery discharge comes from the affected eye. The patient sneezes. He does not report any loss of vision or signs of blurriness. He has no fever or headache. He has not been vomiting. There is no history of trauma or foreign body in the eyes. He

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- says his appetite is good. He has not lost any weight. Occasionally he is constipated. He reports a mild cough, but no shortness of breath.
- Physical Examination:** Fred is a healthy looking boy. His mucous membranes look healthy. The conjunctiva of his left eye is red. The left pupil is a normal size. His tongue and tonsils appear normal. His chest, heart, and abdomen are normal.
- Diagnosis:** Conjunctivitis associated with an upper respiratory infection
- Patient Care:** Clean the eye with cotton that has been soaked in clean, boiled water. Use a cotton applicator.
- Diagnostic Points:** 1. Watery discharge.
2. Cough and sneezing suggest viral upper respiratory infection.

Case Study 3

Name of Patient: Johnston, Adam
Sex: Male
Date of Birth: 14 March 1935
Date of Visit: 8 December 1979
Vital Signs: Temperature 37.1° C
Pulse 22
Respirations 20
Weight 63 kg

Presenting Complaint and Medical History: The patient complains of a pain which has bothered his left eye for the past four days. His eyes have been red and tearing for the past three to four months. The

pain has grown worse during the past four days. He feels pain when he exposes the affected eye to sunlight.

Physical Examination:

The conjunctiva membrane of both his eyes are inflamed. The inflamed condition appears to be worse on the upper eyelids. He has a rough, gray area on the cornea of the left eye.

A discharge comes from the patient's nose. His tonsils are red. The lymph glands are normal. His heart is normal. His abdomen is normal.

Diagnosis:

Trachoma with corneal ulcer

Patient Care:

1. Give 250 mg tetracycline four times a day for two weeks.
2. Apply 1% tetracycline eye ointment.
3. Patch the eye with sterile gauze.
4. Refer the patient to a hospital for care of the corneal lesion.

Diagnostic Points:

1. Chronic tearing and red eyes.
2. Inflammation of the conjunctiva membrane appears worse on the upper eyelid.
3. Gray area on the cornea indicates corneal ulcer.

Case Study 4

Name of Patient: Ray, John
Sex: Male
Date of Birth: 1 May 1977
Date of Visit: 5 December 1979

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Vital Signs:	<p>Temperature 37° C</p> <p>Pulse 90</p> <p>Respirations 18</p> <p>Weight 22 kg</p>
Presenting Complaint and Medical History:	<p>The child's mother says she has noticed that her boy stumbles in the dark. She first noticed this about a month ago. The boy started to walk at one year of age. His appetite is poor. Because the boy stumbles at night, his mother thinks he has trouble seeing. Sometimes his eye is red and tearing. Sometimes fluid runs from his right ear. Sometimes the boy has a cough.</p> <p>The child has not had immunizations. He has had diarrhea several times during the past two months.</p>
Physical Examination:	<p>The boy appears poorly nourished. He does not seem very alert.</p> <p>The cornea and conjunctiva seem dull. A mild inflammation is present. His reflex to light is normal. His cornea is clear.</p> <p>Discharge is present in the right ear canal. A swelling appears on the right side of the boy's neck. A dry rattling can be heard over the whole chest.</p>
Diagnosis:	Night blindness caused by vitamin A deficiency; chronic otitis media
Patient Care:	<ol style="list-style-type: none"> 1. Discuss child's diet with his parents. Tell them what local foods contain vitamin A. 2. Give 25,000-unit vitamin A capsules daily for two weeks. 3. Schedule monthly checkups for the child and give him a 25,000-unit capsule of vitamin A monthly through school age.
Diagnostic Points:	<ol style="list-style-type: none"> 1. The boy stumbled in the dark. 2. The boy's conjunctiva was dull.

Teaching Plan 5

Prevention of Blindness in the Community

- OBJECTIVES**
1. Assess students' sample community presentations on vitamin A deficiency.
 2. Develop students' criteria for a good community meeting.
 3. Use the criteria students developed for their own presentations by other students.
 4. Make a presentation to groups of people or other students.

METHODS Self-instruction, demonstration and return demonstration, discussion

MATERIALS Student Text - Unit 3, critique form for sample community meeting, blank skill checklist, and sample of completed skill checklist

PREPARATION Complete your own critique of the vitamin A deficiency presentation by students. Instructor completes a skills checklist for a community presentation using his own criteria. Students may develop a community message on any topic other than blindness in this module.

TIME: 3 hrs

LEARNING ACTIVITIES

1. Instructor reviews objectives and learning activities for this session and answers students' questions.

10 min

	TIME
2. Students are assigned roles to practice a community presentation on vitamin A deficiency. Fellow students critique the presentation, discussing its strengths and weaknesses. A second group of students repeats the same activity.	30 min
3. In groups of seven or eight, students develop criteria for assessing a community meeting, then review criteria outlined in their skill checklist with the instructor.	30 min
4. Student groups develop their own community message.	50 min
5. Each group presents a community message. Fellow students use their criteria to assess the presentation, then critique and discuss it.	1 hr (15 min per group)

REVIEW EXERCISE
Critique of a Sample Community Meeting

Use this form to note what you liked or disliked about the sample community meeting presentations give by your classmates. Note the strengths and weaknesses of the sample meetings.

	STRENGTHS	WEAKNESSES
Group 1:		
Group 2:		
Group 3:		
Group 4:		

REVIEW EXERCISE

Developing a Skill Checklist

Students will use their own ideas to develop a skill checklist for community meeting presentations. This skill checklist gives samples of ideas students may use.

- Rating: 1 = Inadequate
 2 = Needs improvements
 3 = Satisfactory
 4 = Above average
 5 = Excellent

During your presentation: YES NO RATING COMMENTS

During your presentation:	YES	NO	RATING	COMMENTS
1. Tell the group what your subject for discussion is and why it is important				
2. Find out what people in the group know about the subject to be discussed				
3. Give your presentation in simple, clear language				
4. Present your message in more than one way				
5. Include all members of the group in the discussion				
6. Find out if people understood the message				
7. Make people in the group comfortable and relaxed				

Teaching Plan 6

Promoting Good Dental Health in the Community

- OBJECTIVES**
1. Identify and describe common dental problems.
 2. Explain the causes of common dental problems, the nutritional needs for strong and healthy teeth, and good dental hygiene.
 3. List materials people can use to keep their teeth and gums clean.
 4. Develop community education presentations on dental health.
 5. Make a presentation to groups of people or other students.
 6. Develop criteria for assessing health messages.

METHODS Self-instruction, demonstrations, discussion

MATERIALS Student Text- Unit 4, skill checklist developed in Unit 3.

PREPARATION Complete your own critique of dental health presentations by the students. Complete a skills checklist for a community presentation on dental health.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor reviews objectives and learning activities and answers students' questions. | 15 min |
| 2. Students demonstrate ways to make toothbrushes out of local materials. | 10 min |
| 3. Students and instructor discuss which locally available foods are good or bad for the teeth. | 15 min |

	TIME
4. In groups of seven to eight, students review criteria for assessing a community meeting.	20 min
5. Student groups develop community messages.	1 hr
6. Each student group gives a community message presentation to fellow students. Criteria in the skills checklist are used to assess the presentations.	1 hr

ANSWERS TO REVIEW EXERCISE

Dental Care in the Community

1. List two causes of dental health problems.
 - a. *Changes in peoples' eating habits*
 - b. *Lack of good tooth and gum care*
2. List foods that are good for teeth and gums and foods that are bad for teeth and gums.
 - a. *Foods that are good for teeth and gums include whole grains, fresh vegetables, fruit, nuts, and milk*
 - b. *Foods that are bad for teeth and gums include store foods that are already cooked and ready to eat; sweet, soft, and sticky foods; foods like candy that contain sugar*
3. What local materials can you use to make a brush to clean teeth and gums?
A small branch, young bamboo, or fibers of coconut
4. Develop a community education presentation on dental care for one of these groups:
A group of mothers with young children
A group of children at school
A group of adult men and women
5. Use the skill checklist you developed in Unit 3 to evaluate the dental health presentations given by other students in the classroom.

Teaching Plan 7

Signs of Abnormal Dental and Mouth Conditions

- OBJECTIVES**
1. Describe these signs of dental and mouth problems:
Abnormal color of the teeth
Abnormal color or inflammation of the gums or mucous membranes
Abnormal color, size, shape, and location of lesions in the mouth
Bleeding of gums at the base of the teeth
Swelling of gums, cheek, or jaw
Loose teeth
Pain or discomfort when palpating the teeth or gums
Pain when tapping a tooth
Tender or hard mass inside the mouth
Tender and enlarged lymph glands in the neck
Foul odor from the mouth
 2. Identify signs of dental and mouth problems when you see them during an examination.

METHODS Self-instruction and discussion

MATERIALS Student Text - Unit 5

PREPARATION Instructor selects pictures of the anatomy of teeth and mouth.

TIME: 1 hr 30 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Instructor presents pictures of the anatomy of the teeth and mouth. | 15 min |
| 2. Instructor presents patients and leads discussion on the signs of tooth and mouth problems. | 60 min |
| 3. Instructor evaluates students' knowledge with an informal posttest. | 15 min |

Teaching Plan 8

History of Dental and Mouth Problems

- OBJECTIVES**
1. Practice interviewing others about dental or mouth problems.
 2. Record findings of an interview and examination on official forms in the recommended way.
- METHODS** Self-instruction, discussion, practice interviewing
- MATERIALS** Student Text - Unit 5, case study from Unit 6, record forms
- PREPARATION** Identify patients with dental and mouth problems and ask them to come to class.

TIME: 1 hr 30 min

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. Instructor demonstrates how to take the history of a patient's dental or mouth problem. | 30 min |
| 2. Students practice taking medical histories from others in their work group. For this activity, students will use Case Study 5 as a basis for role-play. After each interview, students will be evaluated by members of their work group. If patients are available, they will be brought into the classroom for students to interview and examine. | 1 hr |

ANSWERS TO REVIEW EXERCISE

Assessing Dental and Mouth Problems

1. Read the symptoms of dental or mouth problems listed in the three typical cases below. In the box beside each case, write the problem you would expect to find when you examine the patient.

SYMPTOMS	PROBLEM YOU WOULD SUSPECT
<p>a. The patient has had a constant, throbbing pain for the past week. The pain is in the back of his mouth, around a molar. His cheek and jaw throbs. He tells you, "I feel as if my head is splitting open." He has had a fever.</p>	<i>Dental abscess</i>
<p>b. The patient has had a toothache on and off for two days. He points to one tooth which causes the pain. He says eating candy and drinking hot tea makes the pain worse. He was eating candy when the pain began.</p>	<i>Dental decay</i>
<p>c. A mother brings her young son to you. She says his gums have been bleeding during the past month. The boy has not injured his mouth. He does not brush his teeth. He does not eat fruit. His gums are sore.</p>	<i>Gingivitis</i>

2. Write the two best ways to prevent problems of the teeth and mouth.

- a. *Good nutrition*
- b. *Good dental hygiene*

Teaching Plan 9

Medical History and Physical Examination of Patients with Dental and Mouth Problems; Clinical Practice

- OBJECTIVES**
1. Interview a patient and obtain information about his dental or mouth problem.
 2. Examine a patient with a dental or mouth problem using the proper procedure.
 3. Record findings of an interview and examination on official forms in the recommended way.

METHODS Clinical demonstration, clinical practice

MATERIALS Skill checklist for assessing patients with dental and mouth problems, record forms

PREPARATION Schedule two hours in the dental clinic with supervision for students.

TIME: 3 hrs

LEARNING ACTIVITIES

- | | |
|--|-------------|
| 1. Instructor shows how to interview and examine a clinic patient. | 15 min |
| 2. Students interview and examine patients using a skill checklist as a guide. | 1 hr 45 min |
| 3. Students present their findings to the class. Instructor and class comment on these findings. | 1 hr |

	<u>TIME</u>
2. Instructor demonstrates the proper way to brush teeth, scale teeth, give a dental anesthetic, put in a temporary filling, and extract a tooth. Students practice the procedures using the skill checklist as a guide.	3 hrs
3. Students work in small groups. Each group works on a case study exercise.	30 min
4. Each group presents its case study findings for discussion and comment by the instructor and the class.	30 min
5. The instructor gives each work group one or two dental or mouth exercises from this unit. Students take turns playing the roles of patients, health workers, and observers. Students rate each other on their ability to advise patients on home care and the prevention of dental or mouth problems. The observer uses a skill checklist to rate the performance of another student.	1 hr 15 min
6. The instructor leads discussion on the role play.	15 min

ANSWERS TO REVIEW QUESTIONS

Canker Sores

1. A ten-year-old boy's parents bring him to your clinic. The boy complains of painful sores in his mouth. You find flat, shallow ulcers scattered inside his mouth. The ulcers have red edges. You find no other sign of trouble. What would you tell the boy and his family?

- a. *Avoid sharp-edged and rough foods.*
- b. *Use a soft tooth brush.*
- c. *He should clean his mouth with a salt water rinse after meals and several other times a day.*
- d. *Take two aspirin every four hours for pain.*

2. The boy who was your patient in Question 1 comes back to your clinic six weeks later. He still has painful sores inside his mouth. He has also lost weight because eating hurts him. Now what would you do for the boy?

Refer him to a doctor.

3. What causes canker sores? Choose the correct answer.

- a. No cause has been proven.
- b. Drinking fluids.
- c. Many different foods.

ANSWERS TO REVIEW QUESTIONS

Gingivitis

1. What is the most common cause of gingivitis? (Choose the correct answer.)
 - a. Viral infection
 - b. Poor diet
 - c. Poor mouth hygiene
2. What is the major complication of gingivitis? (Choose one answer.)
 - a. Dental decay
 - b. Loss of teeth
 - c. Dental abscess
3. Describe the treatment for gingivitis.
 - a. *If tartar is present, remove it with scaling instrument.*
 - b. *Instruct the patient to rinse out his mouth following meals or three times each day for one week. Use a solution containing equal amounts of water and 3% hydrogen peroxide.*

ANSWERS TO REVIEW QUESTIONS

Acute Ulcerative Gingivitis

1. Acute ulcerative gingivitis is a more serious infection of the gums than gingivitis. Explain the difference between clinical pictures of the two problems.

A patient with acute ulcerative gingivitis has more pain and bleeding than a patient with gingivitis. In acute ulcerative gingivitis, ulcers form on the gums at the teeth. Gums swell and turn red. The breath has a foul odor. Lymph glands in the neck may swell. The patient may have a fever. In general, the patient with acute ulcerative gingivitis appears more sick than a patient with gingivitis.

2. When you treat a patient for acute ulcerative gingivitis, you would first follow the steps for treating gingivitis. What other treatment would you then give a patient with acute ulcerative gingivitis?
 - a. *Give 600,000 units procaine penicillin, IM, once a day for five days. Or give 250 mg tetracycline four times a day for five days if the patient is allergic to penicillin.*
 - b. *Use a cotton-tipped applicator to apply a small amount of hydrogen peroxide to the ulcer once a day.*

ANSWERS TO REVIEW QUESTIONS

Tooth Decay

1. What is the main cause of tooth decay?

Poor dental hygiene

2. If a dentist is not available, how would you treat tooth decay?

- a. *Give the patient aspirin for his pain.*

- b. *Identify the exact tooth that is causing the pain:*

Have the patient suck in air over the hurting tooth. Ask him if the pain is worse.

Ask whether sweet, hot, cold, or acid foods make the tooth hurt.

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Tap on the tooth with a metal instrument to see if it causes great pain.

If a tap on the tooth causes great pain, do not fill it.

If tapping on the tooth does not cause great pain, but it is sensitive to cold air or sweets, put in a temporary filling.

3. A complication of tooth decay is abscess.

ANSWERS TO REVIEW QUESTIONS

Dental Abscess

1. Explain how a dental abscess forms.

Tooth decay eats into a tooth, reaching the nerve. The decay kills the nerve.

Infection spreads through the nerve to the root. This deep infection of the tooth is an abscess.

2. A thirty-year-old woman comes to your clinic. She complains of a severe toothache. She has had the toothache for three days. Her temperature is 38.8° C. The left side of her face has swollen. She cannot open her mouth because of the pain. Use the Patient Care Guides to write what you would do for this woman.
- Give her 1,200,000 units procaine penicillin, IM, daily for five days.*
 - Give her one or two tablets of aspirin every four to six hours for pain.*
 - Show her how to apply warm, wet packs on the swelling.*
 - Wait for swelling to go down, then take out the tooth.*
3. Infection of the jawbone is a complication of a dental abscess.

ANSWERS TO REVIEW QUESTIONS

Scaling the Teeth

1. You scale teeth to remove tartar which accumulates below the gum.
Why should you remove the tartar?
To prevent dental and gum problems.
2. A scaling instrument has two ends, the spoon end and a point.
Explain how you should use these to remove tartar.
Spoon end: *the spoon end of the instrument should be drawn from the root of the tooth to the crown of the tooth.*
Point end: *the point end of the instrument is used to remove the tartar between the teeth. Scrape from the root toward the crown of the tooth.*
3. How can you prevent tartar from forming on your teeth?
Proper brushing of the teeth.

ANSWERS TO REVIEW QUESTIONS

Local Dental Anesthetic

1. List four times when you should not give a local anesthetic.
 - a. *When a patient has a history of allergy to local anesthetic.*
 - b. *When the patient has a history of heart disease.*
 - c. *When the patient has a dental abscess which has caused swelling of his face.*
 - d. *When you do not know the exact tooth to be treated or taken out.*

2. When a patient needs an upper front tooth removed, you should:
(Check one answer.)

a. Give one injection of anesthetic on the cheek side of the gum.

b. Give no anesthetic.

c. Give two injections of anesthetic, one on the cheek side and one on the tongue side of the gum.

3. When a patient needs a temporary filling of a lower front tooth, you should: (Check one answer.)

a. Give one injection of anesthetic on the cheek side of the gum.

b. Give no anesthetic.

c. Give two injections of anesthetic, one on the cheek side and one on the tongue side of the gum.

4. You are about to inject a local anesthetic for a nerve block. You pull back the plunger of the syringe, but then you see blood enter the syringe.

a. What does the blood mean?

The needle is in a blood vessel.

b. What should you do?

Move the needle and pull back again on the plunger to see if blood returns again.

5. List two ways to check whether a tooth is anesthetized.

a. *Press a sharp instrument into the gum on all sides of the tooth.*

b. *Tap the tooth.*

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ANSWERS TO REVIEW QUESTIONS

Temporary Filling

1. You see a person who has had a toothache for three weeks. The tooth has a small brown spot on it. You tap the tooth, and the patient does not feel pain. The tooth is not loose. You cannot find any swelling around the tooth or face. What would you do for the patient?

- a. Put in a temporary filling.
 b. Remove the tooth immediately; give aspirin for pain.
 c. Start on aspirin and penicillin; put in temporary filling.

2. When you put a temporary filling into a tooth, you must keep the tooth dry. Explain why.

The filling will not stick inside a wet tooth.

3. Explain what you would use to make up cement for a temporary filling. How would you make it?

Put three drops of eugenol liquid and three times as much zinc oxide powder on a clean piece of glass. Slowly mix the powder with liquid until it is thick. It should not stick to clean glass when finished. If it does, add more powder.

4. List four things you should tell a patient about his temporary filling. Explain the importance of each.

- a. *He should not drink or eat for one hour to allow the cement to dry.*
b. *Avoid biting and chewing on the tooth so the filling does not break and fall out.*
c. *He should make an appointment with a dentist for a permanent filling.*
d. *The filling will last for only one to six months. He needs a permanent filling before the temporary one falls out.*

ANSWERS TO REVIEW QUESTIONS

Tooth Extraction

1. A person complains of a toothache he has had for a week. His face is swollen near the aching tooth. His temperature is 38°C. The aching tooth has a hole in it. Tapping the tooth causes pain. How would you treat this patient?
 - ___ a. Remove the tooth immediately.
 - ___ b. Give him aspirin and send him home. Tell him to return in one week if he still has the toothache.
 - x c. Give him aspirin for pain and start him on penicillin.
 - ___ d. Put in a temporary filling.
2. A man complains of a toothache he has had for three days. He cannot sleep at night. You find the tooth very loose. Moving it causes severe pain. You cannot see any swelling of the face or gums around the tooth. He is not allergic to local anesthetic and does not have heart disease. What would you do?
 - x a. Remove the tooth immediately.
 - ___ b. Give him aspirin and send him home. Tell him to return in one week if he still has the toothache.
 - ___ c. Give him aspirin for pain and start him on penicillin.
 - ___ d. Put in a temporary filling.
3. List five things you should tell a patient after removing his tooth.
 - a. *How to control bleeding by biting down on cotton gauze over the socket.*
 - b. *Not to rinse out his mouth until the next day and then rinse the mouth with warm water after eating.*
 - c. *Chew food on the opposite side of the mouth for the next three to five days.*
 - d. *Come back to the clinic after two days if the pain grows worse.*
 - e. *Come back to the clinic if bleeding does not stop in several hours. (Give the patient a certain time, such as sunset or meal time.)*

Case Study 5

Name of Patient: Bloom, Connie
Sex: Female
Date of Birth: 3 February 1952
Date of Visit: 12 April 1980
Urine: Negative
Vital Signs: Temperature 38.2°C
Pulse 80
Respirations 18
Weight 54 kg

Presenting Complaint and Medical History: The patient has pain and swelling in her lower left jaw. The symptoms began one week ago and they are growing worse. The pain is throbbing. Chewing or trying to open her mouth wide causes more pain. Aspirin gives temporary relief.
Past medical history includes nothing special to note.

Physical Examination: Patient looks distressed. The side of her face over her lower left jaw has swollen. Palpation of the jaw causes pain.
The patient's mucous membranes are pink. Her tongue is coated. Her tonsils cannot be clearly seen as she cannot open her mouth wide enough. The gum around her last lower left molar is swollen and red. The last lower left molar is tender to pressure. A large cavity is visible on top of the molar. The lymph glands on the left side of her neck are tender.
Patient's chest is normal. Her breath sounds vesicular. Her heart is normal. No edema is seen. Her abdomen is normal.

Diagnosis: Abscess caused by dental decay.

- Patient Care:**
1. Give her 1,200,000 units procaine penicillin, IM, daily for five days.
 2. Give her one or two tablets of aspirin every four to six hours for pain.
 3. Show her how to apply warm, wet packs on the swelling.
 4. Wait for the swelling to go down, then take out the tooth.

- Diagnostic Points:**
1. The tooth hurt under pressure.
 2. Gums around the affected tooth are red.
 3. Jaw is swollen.

Teaching Plan 11

Signs of Abnormal Ear, Nose, Sinus, and Throat Conditions

- OBJECTIVES**
1. Recognize, describe, and explain:
 - Loss of hearing
 - Color and smell of discharge from ear
 - Pain when the ear is pulled
 - Color and consistency of discharge from the nose
 - Color of mucous membranes inside the nose
 - Swelling of mucous membranes inside the nose
 - Severe pain in sinus above the eye or over the cheek when the sinus is tapped
 - Inflamed and swollen tonsils with exudate
 - Back of throat inflamed
 - Swollen epiglottis
 - Foreign body in the ear, nose, back of throat, or on the tonsil
 - Swollen and painful lymph glands below the ear, jaw, or in front of the neck
 2. Identify signs of ear, nose, sinus, and throat problems in a patient or in a photograph.
- METHODS** Self-instruction and discussion
- MATERIALS** Student Text- Unit 7
- PREPARATION** Each student should be assigned to a working group of three to four persons. Each group should include students with high pretest scores and students with low pretest scores.

TIME: 1 hr 30 min

LEARNING ACTIVITIES

- | | |
|---|--------|
| 1. The instructor presents pictures of the anatomy and physiology of the ears, nose sinus, and throat. | 15 min |
| 2. Instructor presents patients and leads discussion on the signs and symptoms of ear, nose, sinus and throat problems. | 1 hr |
| 3. Instructor evaluates students' knowledge with an informal posttest. | 15 min |

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ANSWERS TO REVIEW EXERCISE

Assessing Ear, Nose, Sinus, and Throat Problems

1. During a physical examination of the ears, nose, sinuses, and throat, you should identify and record abnormal findings. Examples of abnormal findings are listed below. Explain what each finding is a sign of.

FINDING	SIGN OF
a. You crumble a piece of paper behind a two-year-old baby. The baby does not turn to look at the paper.	<i>Hearing loss</i>
b. You are at arm's length from a four-year-old child. You ask him to repeat a word. The child does not respond.	<i>Hearing loss</i>
c. You examine a child whose ear has been draining for three weeks. The discharge has pus and is foul smelling.	<i>Chronic otitis media (chronic ear infection)</i>
d. A patient feels severe pain when you tap the sinus over his left eye.	<i>Acute sinusitis</i>
e. Examining a patient's throat, you notice that the tonsils are red, swollen, and covered with pus.	<i>Acute tonsillitis</i>

Teaching Plan 12

History of Ear, Nose, Sinus, and Throat Problems

- OBJECTIVES**
1. Interview a fellow student to obtain information about his ear, nose, sinus, or throat problem.
 2. Record findings of interview and examination on official forms, in the recommended way.
- METHODS** Self-instruction, discussion, practice interviewing
- MATERIALS** Student Text- Unit 7, case studies from Unit 8 in Student Text, record forms
- PREPARATION** Identify patients with ear, nose, sinus, and throat problems and ask them to come to class

TIME: 1 hr 30 min

LEARNING ACTIVITIES

- | | |
|--|--------|
| 1. Instructor demonstrates how to take the history of a patient's ear, nose, sinus, or throat problem. | 30 min |
| 2. a. Students practice taking medical histories from other members of the work groups. For this activity, students will use the case studies in Unit 8. | 1 hr |
| b. If patients are available, they will be brought into the classroom for students to interview and examine. | |

Teaching Plan 13

Medical History and Physical Examination of Patients with Ear, Nose, Sinus, and Throat Problems

OBJECTIVES	<ol style="list-style-type: none">1. Interview a patient about his ear, nose, sinus, or throat problem.2. Examine a patient with an ear, nose, sinus, or throat problem.3. Record findings of an interview and examination on official forms in the recommended way.
METHODS	Clinical demonstration, clinical practice
MATERIALS	Skill checklists for assessing ear, nose, sinus, and throat problems; record forms
PREPARATION	Schedule two hours in the ear, nose and throat clinic with supervision for students.

TIME: 3 hrs

LEARNING ACTIVITIES

1. Instructor demonstrates how to interview and examine a clinic patient.	15 min
2. Students interview and examine patients, using checklists as a guide to correct performance.	1 hr 45 min
3. Students present their findings to the class. Instructor and class comments on these findings.	1 hr

Teaching Plan 14

Care of Patients with Ear, Nose, Sinus, and Throat Problems

- OBJECTIVES**
1. Describe the clinical picture that occurs in these ear, nose, sinus, and throat problems:
 - Acute upper respiratory infection
 - Acute otitis media
 - Chronic otitis media
 - Mastoiditis
 - External otitis
 - Wax in ears
 - Acute sinusitis
 - Acute bacterial tonsillitis
 - Foreign body in the ear, nose, and throat
 - Nose bleed
 2. Demonstrate how to interview and examine patients. Identify ear, nose, sinus, and throat problems.
 3. Describe treatment and care of patients suffering from ear, nose, sinus, and throat problems.
 4. Demonstrate how to tell patients and their families about the home care and prevention of these problems.
 5. Demonstrate how to examine a child for hearing loss, clean pus from a draining ear, control a nose bleed, locate and remove a foreign body from the ear, nose, or throat, and remove wax from the ear canal.

METHODS Discussion, self-instruction, case study exercises, role-play

MATERIALS Student Text- Unit 8, material for hearing tests, cleaning pus from a draining ear, control of nose bleed, and for removal of a foreign body from the ear, nose or throat; case study exercises 6, 7, 8, 9, and 10.

PREPARATION Locate patients with ear, nose, sinus, and throat problems.

TIME: 6 hrs

LEARNING ACTIVITIES

- | | |
|---|-------------|
| 1. Instructor makes his presentation and leads discussion on signs and symptoms of ear, nose, sinus, and throat problems. | 1 hr |
| 2. Instructor presents patients with ear, nose, and throat problems. Students describe each abnormal sign and identify each patient's problem. | 1 hr |
| 3. Instructor demonstrates how to test a child's hearing; clean pus from a draining ear; control a nose bleed; locate and remove a foreign body from the ear, nose, or throat; and remove wax from the ear canal. Students practice the procedures using skill checklists as a guide. | 1 hr |
| 4. Students work in small groups. Each group works on case study exercises. | 1 hr |
| 5. Each group presents its case study findings for discussion and comment by the instructor and the class. | 30 min |
| 6. Instructor assigns each work group one or two ear, nose, sinus, or throat problems from this unit. Group members take turns playing the roles of community members, health worker, or observer. | 1 hr 15 min |
| 7. Instructor leads discussion on the role-play. | 15 min |

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ANSWERS TO REVIEW QUESTIONS

Assessing Patients with Ear, Nose, Sinus and Throat Problems

1. When you are taking a history of a patient who complains of having a common cold, or upper respiratory infection, you ask how long he has had it. Why is this question important?

Most colds, or upper respiratory infections, last three to ten days. If the symptoms have lasted longer, then you should think about a secondary bacterial infection which may be causing a complication.

2. List four possible complications of an upper respiratory infection.
 - a. *Acute bacterial tonsillitis*
 - b. *Acute sinusitis*
 - c. *Acute otitis media*
 - d. *Acute bronchitis*

3. Acute otitis media is an infection of the middle ear. How does bacteria get into the middle ear?

Bacteria spreads upward through the eustachian tube into the middle ear cavity.

4. What is the one most common presenting complaint associated with acute otitis media?

Ear pain

5. Acute otitis media is a complication of an upper respiratory infection.

6. How would you care for a five-year-old child with acute otitis media? Use your Patient Care Guide to answer this question.

- a. *Give 50 mg ampicillin per kilogram body weight per day, divided into four doses for seven days.*

- b. Give .25% phenylephrine hydrochloride nose drops three times a day for three to four days.
- c. Give one 300 mg tablet of aspirin every four to six hours for three to four days or less if there is no pain.
7. When would you refer a patient with acute otitis media to a hospital?
If there is evidence of a hearing loss, or if the patient is not better after one week of treatment, or if the ear is draining and it continues to drain after one week of treatment.
8. A common complication of acute otitis media is chronic otitis media. What is the most common presenting complaint associated with this problem?
One or both ears drain a pussy discharge. This discharge is often foul smelling.
9. You should ask a patient with otitis media how long his ear has been draining. Why is this information important?
If an ear has been draining for two weeks or more, the diagnosis is chronic otitis media instead of acute otitis media.
10. Patients with acute otitis media and patients with chronic otitis media should both be referred to a doctor if treatment does not clear the infection.
- a. How long should you treat acute otitis media before referring the patient?
One week.
- b. How long should you treat chronic otitis media before referring the patient?
Two weeks.
11. The prevention of chronic otitis media is the correct and early treatment of acute otitis media .
12. Write the presenting complaint, medical history, and physical examination findings you would expect from a patient with mastoiditis.
Presenting complaint: *Ear pain, or pain over the mastoid bone, and fever and headache.*

Medical history: *The patient has had an ear infection within the last month or has pus draining from his ears.*

Physical examination: *Pus drains from the ear. The mastoid process may be swollen, red, and tender. Tapping the mastoid process with a finger causes pain.*

13. What is the indication for using Penicillin V for a patient diagnosed as having external otitis? Use your Patient Care Guides to answer this question.

If there is fever and swelling of the lymph glands in the neck.

14. If ear wax has built up in a patient and become firmly packed into the ear canal, he may complain of a feeling of fullness in the ear or discomfort in his ear or a hearing loss.

15. Acute sinusitis is a complication of an upper respiratory infection.

16. What is the primary physical finding when making the diagnosis of acute sinusitis?

Pain over the sinus when tapped.

17. What is the drug of choice for opening the passageway between the sinuses and the nasal cavity so the sinuses of a patient with acute sinusitis can drain?

Ephedrine nose drops

18. Match the following symptoms and physical signs with the problems:

<u>B</u> a. Exudate on tonsils	A - Upper respiratory infection
<u>A</u> b. Runny nose and dry cough	
<u>A</u> c. Headache	B - Acute bacterial tonsillitis
<u>A</u> d. Redness of throat (alone)	
<u>B</u> e. High fever	
<u>A</u> f. Mild fever	
<u>A</u> g. Red eyes	

19. A mother brings her ten-year-old son to you. She reports that a few days ago the boy had a runny nose and cough. Now he is hot. The boy says swallowing, eating, and drinking hurts his throat. You find:

Weight: 50 kg

Temperature: 38.8°C

Swollen and tender lymph glands in the boy's neck. His tonsils are red, swollen, and are spotted with a white exudate.

What is your diagnosis? How would you treat this patient?

Acute bacterial tonsillitis

Tell the boy to rest in bed. Encourage him to drink more fluids than he normally would. He should gargle with warm, salt water four times a day. Give him one 300 mg aspirin tablet every three to four hours for pain. Take one 125 mg oral penicillin V tablet four times a day for ten days.

20. A mother brings you her three-year-old boy. She tells you the child has been complaining about his nose for several days. Because she was busy and the child did not have a fever, she did not worry about it. However, the child still complains about his nose. He says he can't breathe out of one side. Yesterday pus started draining out of the left nostril. You ask the child if he put anything in his nose. The mother scowls at her child and seeing her, the boy quickly says no. The child's temperature is normal. His eyes, ears, and throat are normal. He has no pain over his sinuses. The right nostril is clear. You cannot see inside the left nostril because of the pus. You find no swollen or painful lymph glands around the ear, under the jaw, or in the neck. What do you suspect is the child's problem? How would you care for this patient?

There is a foreign body in the child's left nostril.

Refer the patient to a doctor because the foreign body cannot be seen. Explain to the mother why the child needs to be referred.

21. If an adult patient comes to you with a complaint of nose bleeds, what should you always check as a possible cause?

You should check the patient's blood pressure to see if hypertension is causing the nose bleeds.

Case Study 6

Name of Patient: Moto, Henry
Sex: Male
Date of Birth: 5 August 1957
Date of Visit: 12 July 1979
Urine: Negative
Vital Signs: Temperature 36.6°C
Pulse 72
Respirations 18
Blood Pressure 110/80
Weight 60.7 kg

Presenting Complaint and Medical History: The patient has a throbbing earache. It began with itching inside his right ear. The pain began suddenly and is growing worse. The pain has lasted two days. An analgesic, panadol, helps lessen the pain. No aggravating factor or associated symptoms are presented. The patient has no fever. He has not seen any discharge coming from the ear. There is no sign of a foreign body causing the problem. He has no shortness of breath, no cough, no chest pain, and no weight loss. His hearing is normal. He has a good appetite, his bowels are regular, and his urine is normal.

Physical Examination: The patient looks healthy. His mucous membranes are pink. His tongue is moist. His tonsils are normal. His neck is normal. His right ear canal is red and swollen. A thin, watery discharge covers the painful area. Moving the ear causes pain. Patient's mastoids are not painful or swollen. His breath sounds normal. His chest is normal. His heart is normal. His abdomen is normal.

Diagnosis: Acute external otitis

- Patient Care:**
1. Apply warm, wet compresses to the ear for thirty minutes four times a day until ear discharge clears.
 2. After each application of the compress, gently dry out the ear canal.
 3. Give two tablets of aspirin four times a day for ear discomfort.
 4. Advise the patient not to go swimming for several weeks. If he does get water in his ear, advise him to put three to four drops of 70% alcohol into the ear to help it dry.

- Diagnostic Points:**
1. Swelling and redness of ear canal
 2. Pain when outer ear is moved

Case Study 7

Name of Patient: Isley, Peter
Sex: Male
Date of Birth: 3 March 1968
Date of Visit: 12 August 1979
Urine: Negative
Vital Signs: Temperature 37.6°C
Pulse 86
Respirations 22
Weight 43.2 kg

Presenting Complaint and Medical History: The patient has had trouble swallowing for the past two days. He says swallowing hurts him. The onset was sudden and the pain is growing worse. Aspirin

helps relieve the pain. Hard foods aggravate it. He has a fever and has had a dry cough for two days.

Past medical history: The patient had mumps three years ago. He has never been hospitalized before. His immunization shots are up to date.

Physical Examination:

The patient has a slight fever. His mucous membranes are moist and pink. His tongue is normal. His tonsils are swollen and red. They are covered with pus. The lymph glands in his neck are swollen and painful. His breath sounds normal. His chest, heart and abdomen are all normal.

Diagnosis:

Acute bacterial tonsillitis

Patient Care:

1. Encourage patient to rest.
2. Encourage patient to drink one to two glasses of water or juice or other liquids between each meal to increase oral fluid intake.
3. Give two aspirin every four to six hours for sore throat and fever.
4. Tell the patient to gargle with warm salt water three to four times a day. This will relieve some of the pain in his throat.
5. Give the patient 250 mg of penicillin V four times a day for ten days. If the patient has a history of allergies, give him erythromycin instead of penicillin.

Diagnostic Points:

1. The onset of pain was sudden with no other sign of upper respiratory infection.
2. His tonsils are covered with pus.
3. His normal temperature is a point against diagnosis of bacterial tonsillitis, but the patient has been taking aspirin and this may have brought a fever down.

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Case Study 8

Name of Patient: Barnes, Lucy
Sex: Female
Date of Birth: 4 January 1938
Date of Visit: 7 October 1974

Urine: Negative
Vital Signs: Temperature 37.7°C
Pulse 80
Respirations 20
Blood Pressure 140/90
Weight 67.5 kg

Presenting Complaint and Medical History: Patient complains of a headache in her forehead. She has a stuffy nose, especially in the morning when she rises. Sometimes she has a fever. Discharge from her nose sometimes is watery and sometimes is thick and yellow.

Past medical history: The patient has never been hospitalized. Her family medical history shows nothing special to note.

Physical Examination: The patient is an obese, worried-looking woman. She breathes through her mouth. Her mucous membranes are pink. Her tongue is pink, but coated and dry. Her pharynx looks red. She has post nasal drip. Her tonsils are normal. Her neck, chest, and heart are normal. Her abdomen sticks out. Her abdominal organs are not palpable. She shows no sign of edema. Her genitalia are normal. Pressure above her eyebrows causes pain. Her nasal mucous membranes are congested.

Diagnosis: Sinusitis

- Patient Care:**
1. Tell the patient to hold a warm towel against her forehead to relieve the pain.
 2. Give her an oral antibiotic, 250 mg penicillin V four times a day for one week.
 3. Give her .25% phenylephrine nose drops. Show her how to put them in her nose. Tell her to put drops into each nostril four times a day for about four days to drain her sinuses.
 4. Give her aspirin. Tell her to take two tablets four times a day to relieve her pain.

- Diagnostic Points:**
1. Fever
 2. Stuffy nose with discharge
 3. Tenderness over her eyebrows

Case Study 9

Name of Patient: Abel, Cass
Sex: Male
Date of Birth: 10 August 1959
Date of Visit: 5 February 1979

Vital Signs:

Temperature	38.2°C
Pulse	72
Respirations	20
Weight	49.5 kg

Presenting Complaint and Medical History: The patient complains of fever, runny nose, coughing, sore throat, sneezing, and general aches. The symptoms started three days ago. They do not seem to be growing any worse. His cough is dry. He has lost his appetite, but has not lost weight.

Past medical history: The patient has frequent headaches. He occasionally drinks and smokes.

Family history: The patient's father died soon after he had a stroke.

Physical Examination: The patient is a healthy looking young man. His mucous membranes are pink. His tongue is moist and coated. His pharynx is clear but inflamed. His neck is not swollen. His breath sounds normal. His heart and abdomen are normal.

Diagnosis: Upper respiratory infection

- Patient Care:**
1. Encourage the patient to rest and drink water, juice, or other fluids between each meal.
 2. Give the patient aspirin and tell him to take two tablets every four to six hours for discomfort.
 3. Give him glyceryl guaiacolate and tell him to take one teaspoonful every four hours for his cough.
 4. This is a viral infection; do not use antibiotics.

- Diagnostic Points: 1. Sneezing, sore throat, cough, and runny nose.
2. Red pharynx with no pussy exudate.

Case Study 10

Name of Patient: Ali, Ben
Sex: Male
Date of Birth: 16 June 1973
Date of Visit: 12 July 1979
Urine: Negative
Vital Signs: Temperature 37.7°C
Pulse 74
Respirations 18
Blood Pressure 120/80
Weight 29.2 kg

Presenting Complaint and Medical History: Fluid has been draining from the patient's left ear for the past twenty-four hours. The problem started suddenly with fever and pain in his ear. The pain was worse when he swallowed food. He had a slight decrease in hearing on the left side. After three days, the ear began to drain.

Past medical history: The patient has had no ear problems before. He has never been kept in the hospital. His vaccinations are up to date.

Physical Examination: The patient looks like a healthy young boy. His mucous membranes are pink. His tongue is moist. His tonsils are slightly enlarged, but not inflamed. His right ear looks normal. A pussy fluid drains from his left ear. The ear drum cannot be seen. Moving the ear causes him no pain. His mastoids are normal, without pain. His chest, heart, and abdomen are all normal.

Diagnosis: Acute otitis media

- Patient Care:**
1. Give the patient an antibiotic to take for seven days. You may give him 125 mg penicillin to be taken orally every six hours, at least one hour before or two hours after meals.
 2. Use nose drops to help drain the middle ear. Show the patient's parents how to give the nose drops. Ask them to demonstrate the procedure. Tell them to give the boy nose drops four times a day for the next four days.
 3. Give the patient aspirin. Have him take one tablet every four to six hours for fever or discomfort.
 4. Show the patient's parents how to swab his ear with a cotton-tipped applicator. Tell them to clean the ear every day.
 5. If the ear drains for more than one week, refer the patient to a hospital.

- Diagnostic Points:**
1. Fever
 2. Ear pain
 3. Discharge has started coming from the ear

Teaching Plan 15

Diagnosing and Caring for Patients with Dental, Eye, Ear, Nose, and Throat Problems; Clinical Practice

- OBJECTIVES**
1. Diagnose dental, eye, ear, nose, and throat (DEENT) problems.
 2. Perform patient care procedures; clean patients' eyes; apply eye ointment or eye drops; locate and remove a foreign body from a patient's eye, ear, throat, or nose, and wax from the ear canal; demonstrate proper dental hygiene; scale teeth; administer dental anesthesia; apply temporary dental filling; perform dental extraction; test a child for hearing loss; clean pus from a draining ear; control a nose bleed.
 3. Advise patients about caring for DEENT problems at home.

METHODS Supervised clinical practice for three days

MATERIALS Skill Checklists, Evaluation Records, Patient Care Guides

PREPARATION Arrange supervision of students for three days of DEENT clinic activity

TIME: 3 days

LEARNING ACTIVITIES

Student groups should meet for a day and a half to practice:

Interviewing and examining patients

Procedures

Delivering health talks to individuals or groups of patients

Teaching Plan 16

Providing Care for Patients with Dental, Eye, Ear, Nose, and Throat Problems

- OBJECTIVES**
1. Diagnose all the dental, eye, ear, nose, and throat problems described in this module.
 2. Properly record information about medical history, physical examination, and patient care.
 3. Provide correct patient care, using the treatment described in this module.
 4. Advise patients about the home care and prevention of dental, ear, eye, nose, and throat problems.

METHODS Supervised clinical practice for one week

MATERIALS Skill checklists, Evaluation Records, Patient Care Guides

PREPARATION Review student guides in the module for entry level skills and knowledge. Since this activity will occur concurrently with other clinical rotations, place two or three students in the clinic each given week. Arrange for supervision of the students during this activity.

TIME: 1 week

LEARNING ACTIVITIES

1. Students obtain medical histories and perform physical examinations.
2. Students diagnose dental, eye, ear, nose and throat problems.
3. Students:

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- Clean patients' eyes
 - Apply eye ointments or eye drops
 - Locate and remove a foreign body from a patient's eye
 - Demonstrate proper dental hygiene
 - Scale teeth
 - Administer dental anesthesia
 - Apply temporary dental filling
 - Perform dental extraction
 - Test child for hearing loss
 - Clean pus from draining ear
 - Control nose bleeds
 - Locate and remove a foreign body from a patient's ear
 - Locate and remove a foreign body from a patient's throat
 - Locate and remove a foreign body from a patient's nose
 - Locate and remove wax from the ear canal
4. Students present health messages to individual patients or groups of patients.
 5. All students are evaluated at least twice on all the above activities.

Teaching Plan 17

Assisting People in a Community to Care for and Prevent Dental, Eye, Ear, Nose and Throat Problems

- OBJECTIVES**
1. Provide clinical services to people who suffer from dental, eye, ear, nose, and throat problems.
 2. Identify infectious dental, eye, ear, nose and throat diseases and plan a program to prevent them from occurring and spreading.
 3. Advise the community about its role in preventing dental, eye, ear, nose, and throat problems.
 4. Identify other members of the health team who can assist in prevention.

METHODS Practice in providing patient care, assessing the community, and training community health workers

MATERIALS Community Experience Log Book, reference materials

PREPARATION See student guide for details of entry level skills and knowledge. See Community Phase manual for details of organization and supervision of community practice.

TIME:

LEARNING ACTIVITIES

1. Students provide clinical services to patients with dental, eye, ear, nose, and throat problems.
2. Students assess the number of dental, eye, ear, nose, and throat problems spread by personal contact in the community. Students record their findings in a written report.

Included in 3 months of community experience.

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| <ol style="list-style-type: none">3. Students plan activities that will help a community reduce the occurrence of dental, eye, ear, nose, and throat problems.4. Students begin training a community health worker to care for dental, eye, ear, nose, and throat problems.5. Instructor evaluates student performance in the community. | |
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